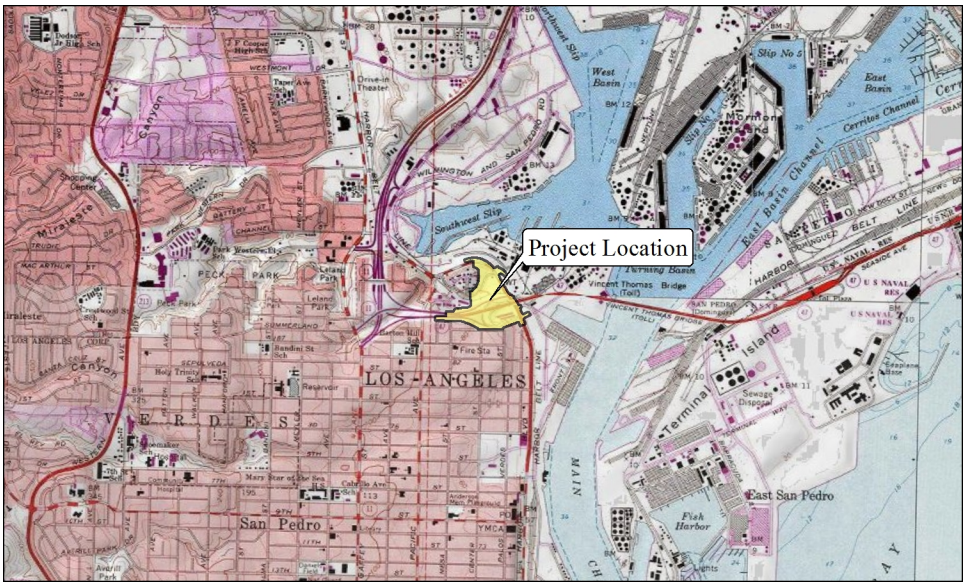
State Route 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 47 (PM 0.3/0.8)
EA 31850/EFIS 0715000304

Negative Declaration/Finding of No Significant Impact



Prepared by the
State of California, Department of Transportation
in Coordination with the City of Los Angeles Harbor Department

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.

Caltrans

March 2019

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07-LA-47-PM 0.3/0.8
EA 31850 / EFIS 0715000304

State Route-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project
(Post Mile 0.3 to Post Mile 0.8) in the City of Los Angeles, California

INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION /ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13,California Public Resources Code
(Federal) 42 USC 4332(2)(c), 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation (CEQA Lead Agency)

Responsible Agencies: City of Los Angeles Harbor Department, California Transportation Commission

Sept 28, 2018
Date of Approval

Ronald Kosinski
Ronald Kosinski
Deputy District Director
Division of Environmental Planning
California Department of Transportation

The following person may be contacted for more information about this document:

Savannah Speerstra, Environmental Planner
Caltrans District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012
(213) 897-2022

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CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT

FOR

State Route 47/Vincent Thomas Bridge and Front Street/
Harbor Boulevard Interchange Reconfiguration Project

The California Department of Transportation (Caltrans), in cooperation with the City of Los Angeles Harbor Department (LAHD), has determined that Alternative 3 (Build Alternative) will have no significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment (EA), which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project, and the appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA (and other documents as appropriate).

The environmental review, consultation, and any other action required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration (FHWA) and Caltrans.

March 8, 2019
Date

Ronald Kosinski
Ronald Kosinski
Deputy District Director
Division of Environmental Planning, District 7
California Department of Transportation

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SCH Number: 2018101003

Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans), in cooperation with the City of Los Angeles Harbor Department (LAHD), proposes to reconfigure the existing interchange at State Route 47 (SR-47)/Vincent Thomas Bridge and Harbor Boulevard/Front Street. The project limits on SR-47 extend from approximately Post Mile [PM] 0.3 to PM 0.8 (SR-47 from west of Harker Street to east of North Front Street) in the City of Los Angeles in Los Angeles County, California.

Determination

Caltrans has prepared an Initial Study (IS) for this project and, following public review, has determined from this study that the proposed project would not have a significant impact on the environment for the following reasons.

The proposed project would have no impact on the following resources: Agriculture and Forest Resources, Mineral Resources, Population and Housing, Wild and Scenic Rivers, and Threatened and Endangered Species.

The proposed project would have less than significant impacts to: Land Use and Planning, Coastal Zone, Public Services, Utilities and Service Systems, Transportation/Traffic, Visual/Aesthetics, Cultural Resources, Paleontological Resources, Hydrology and Water Quality, Geology and Soils, Hazards and Hazardous Materials, Air Quality, Noise, Recreation, Biological Resources, and Tribal Cultural Resources.

Ronald Kosinski

Ronald Kosinski
Deputy District Director
Division of Environmental Planning, District 7
California Department of Transportation

March 8, 2019

Date of Approval

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Chapter 1 Proposed Project

1.1 Introduction

The State of California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to United States Code (USC) Title 23, Section 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. The Moving Ahead for Progress in the 21st Century Act (MAP-21) (Public Law 112–141), signed by President Barack Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the California Department of Transportation (Caltrans) entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (National Environmental Policy Act [NEPA] Assignment MOU) with the Federal Highway Administration (FHWA). The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of 5 years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 Categorical Exclusion Assignment MOU, projects excluded by definition, and specific project exclusions.

Caltrans, in cooperation with the City of Los Angeles Harbor Department (LAHD) and the City of Los Angeles (City), is proposing to reconfigure the existing interchange at State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard. The project limits on SR-47 extend from approximately Post Mile [PM] 0.3 to PM 0.8 (i.e., SR-47 from west of Harker Street to east of North Front Street). Caltrans, as assigned by FHWA, is the Lead Agency under NEPA. Caltrans is also the Lead Agency under the California Environmental Quality Act (CEQA).

The proposed project is listed as a financially constrained project in the Southern California Association of Governments (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as amended by Final Amendment No. 2, which received its conformity determination from FHWA and the Federal Transit Administration (FTA) on August 1, 2017. The project is also in the 2017

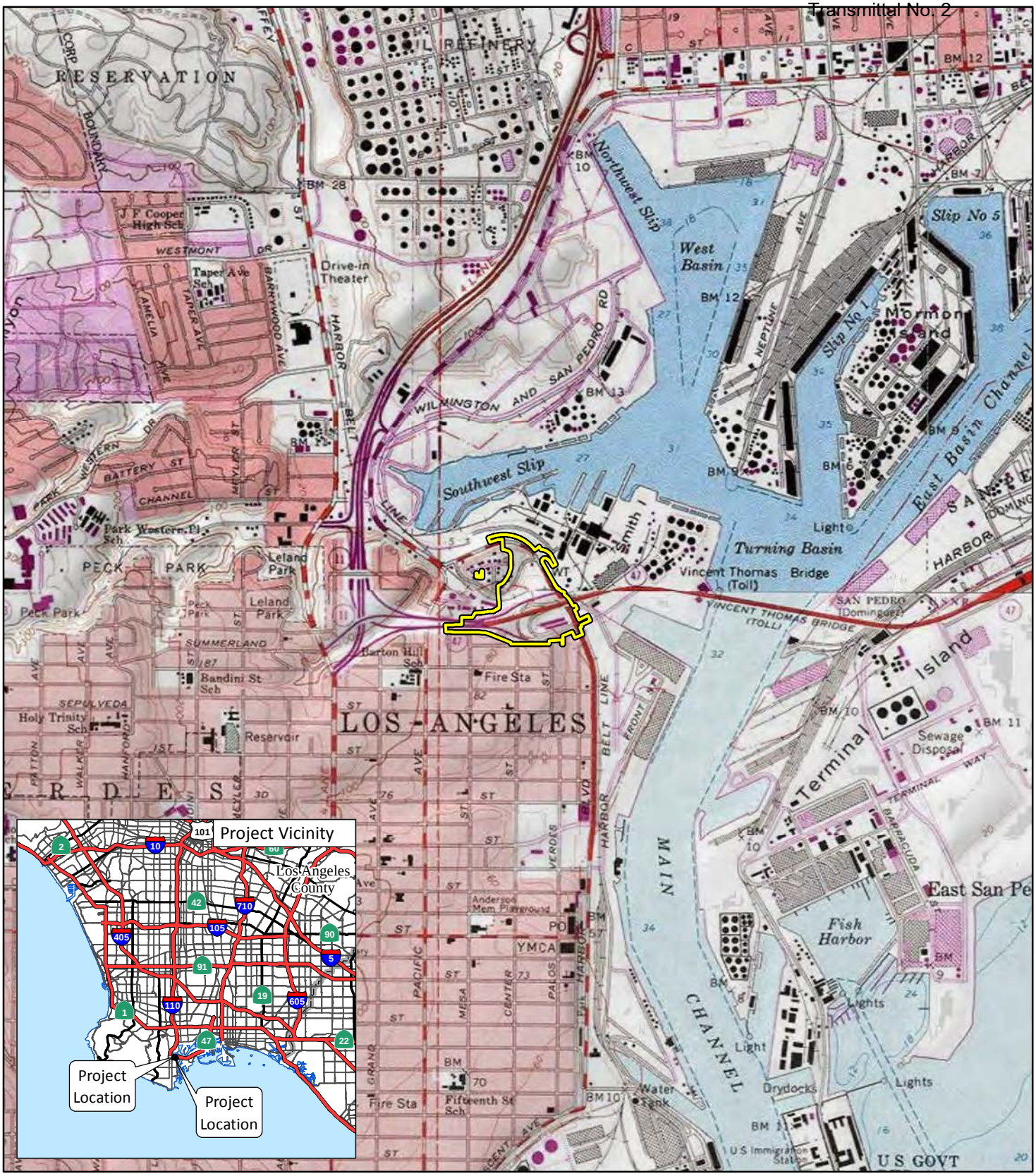
Federal Transportation Improvement Program (FTIP) through Amendment No. 17-02, which received its conformity determination from the FHWA/FTA on February 21, 2017: "Project ID: LA0G1290, Description: Prepare Caltrans Project Study Report (PSR), Project Report (PR), preliminary plans and Environmental Documentation (ED) reports to obtain Caltrans approval and Environmental clearance for the SR47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project." Copies of the 2016 RTP and 2017 FTIP Project Listings for the proposed project are provided in Appendix C, 2016 SCAG RTP/SCS and 2017 FTIP Project Listings.

1.1.1 Existing Facility

SR-47 is a State highway that begins at the southern terminus of Interstate (I) 110 in Los Angeles and travels east on the Vincent Thomas Bridge to Terminal Island at the Port of Los Angeles (POLA), which is owned and managed by the LAHD. Northeast of Navy Way, SR-47 heads north and includes a portion of Henry Ford Avenue and then a portion of Alameda Street, eventually ending at SR-91 in Compton. SR-47 serves as a linkage connecting Terminal Island to the mainland in Los Angeles County. The section of SR-47 within the project area (Figure 1-1) is a four-lane expressway incorporating the Vincent Thomas Bridge to connect I-110 in the community of San Pedro to Terminal Island. The Front Street/Harbor Boulevard interchange is immediately adjacent to the west abutment of the Vincent Thomas Bridge.

The existing interchange is a modified folded-diamond configuration featuring a westbound two-lane off-ramp that loops beneath the SR-47 mainline to join the eastbound single-lane off-ramp in a shared three-lane exit terminus. The two-lane eastbound on-ramp drops to a single lane through the loop, joins the mainline, and quickly merges prior to the bridge abutment. The westbound on-ramp also features two lanes that drop to a single-lane on-ramp gore and enters the mainline as an auxiliary lane to the northbound I-110 connector.

Harbor Boulevard becomes Front Street north of SR-47 and is a four-lane arterial throughout. The signalized ramp terminus south of SR-47 is aligned with Swinford Street, which provides access into the POLA cruise terminals and waterfront area. The westbound on-ramp intersection is uncontrolled. Bike lanes are provided along Front Street and Harbor Boulevard.



LEGEND

Project Location

FIGURE 1-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Project Location Map

07-LA-47 PM 0.3/0.8

EA No. 07-31850

0 1000 2000

FEET

SOURCE: USGS 7.5' Quad - San Pedro (1981) and Torrance (1981)

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North of the existing interchange, Knoll Drive, which provides one-way access down from Knoll Hill, aligns with the West Basin Container Terminal gate at a signalized intersection.

Within the project area, there is a former Pacific Harbor Rail Line that is inactive. Its alignment was abandoned at Front Street and Pacific Avenue and is no longer in service south of that intersection. South of the project area along Harbor Boulevard, the Waterfront Red Car line was terminated in 2017 to accommodate the San Pedro Public Market, a visitor-serving retail, restaurant, and entertainment development.

Several LAHD-owned properties lie between Knoll Hill and the former Pacific Harbor Rail Line alignment. Immediately adjacent to Front Street is a LAHD Truck Inspection Facility. Behind this facility and accessible via a service road from Front Street are a Police K-9 dog training facility and a public-use off-leash dog park. Between the rail alignment and the westbound on-ramp is a sewer pump station.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the proposed project is to: (1) improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange; and (2) improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community.

1.2.2 Need

Currently, westbound SR-47 traffic and southbound I-110 traffic exit to a shared terminus at Harbor Boulevard. This condition creates operational issues caused by vehicle slowing and weaving on the ramp as vehicles approach the terminus. Traffic routinely backs up on both exit ramps during peak periods, and this condition is expected to worsen with projected growth. The operational efficiency of the on- and off-ramps is further reduced by the presence of short acceleration/deceleration lanes. The *Traffic Study Report for the State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration* (January 2018) identifies existing and forecasted traffic conditions within the project area. Key information is summarized below.

"Level of service" (LOS) defines the quality of traffic flow. For freeways, LOS is defined by the density of vehicles per mile (LOS decreases as density increases). Section 1.2.2.1, below, provides an analysis of the existing conditions within the

project area, as well as projections for deteriorating LOS conditions in the future. Inadequate merge/diverge and weaving distances that slow traffic speeds contribute to overall low LOS along SR-47.

1.2.2.1 Capacity, Transportation Demand, and Safety

Levels of Service and Travel Times

Existing Baseline conditions (2015) result in LOS D at one ramp and none of the intersections in the project limits. By the build-out opening year (2023) one ramp, one mainline freeway segment, and one intersection would deteriorate to LOS D under the No Build condition. By the future year (2045), all but one of the freeway segments would operate at LOS D during one or both peak-hour periods under the No Build condition.

As stated above in Section 1.2.2, freeway traffic flow can be defined in terms of LOS. For freeways, there are six defined levels, ranging from LOS A to LOS F. As shown on Figure 1-2, LOS A represents free traffic flow with low traffic volumes and high speeds, while LOS F represents traffic volumes that exceed the facility's capacity and result in forced-flow operations at low speeds. Traffic volumes on a facility such as SR-47 substantially affect travel speeds and times.

The LOS on a freeway characterizes the performance of the freeway in terms of both travel time and speed. Table 1.1 provides traffic volume data for the existing year (2015), opening year (2023), and future year (2045) in the No Build condition, including the number of vehicles and the percentage of trucks traveling on segments of both northbound and southbound I-110 as well as eastbound and westbound SR-47 during the a.m. and p.m. peak hours. As shown in Table 1.1, similar traffic demand exists for both the northbound and southbound directions during the a.m. and p.m. peak hours under existing conditions (2015) and the No Build condition in the opening year (2023) and future year (2045).

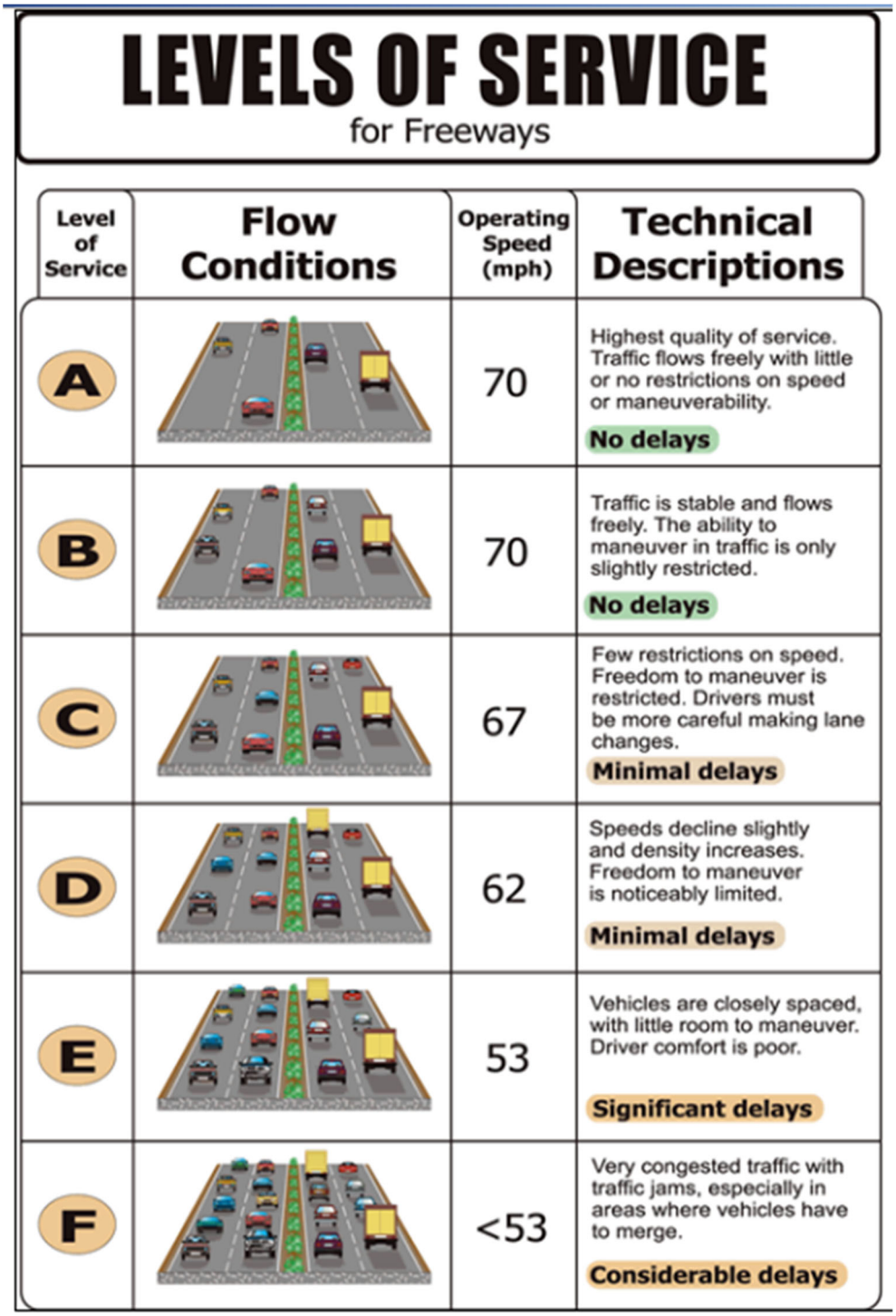


Figure 1-2: Level of Service Thresholds for a Basic Freeway Segment

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Table 1.1: Existing (2015) and Forecast Years (2023 and 2045) No Build Alternative Traffic Volumes

Freeway/Ramp Segment	Existing (2015)				Opening Year (2023)				Future Year (2045)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Vehicles	Truck (%)	Vehicles	Truck (%)	Vehicles	Truck (%)	Vehicles	Truck (%)	Vehicles	Truck (%)	Vehicles	Truck (%)
I-110 southbound to SR-47 eastbound	1,566	10%	1,632	9%	1,766	18%	1,943	10%	2,612	57%	1,973	18%
I-110 northbound (Gaffey Street) to SR-47 eastbound	671	10%	700	9%	757	18%	832	10%	956	1%	879	1%
SR-47 eastbound west of Harbor Boulevard	2,237	10%	2,332	9%	2,523	18%	2,775	10%	3,568	42%	2,852	13%
SR-47 eastbound off-ramp to Harbor Boulevard	785	6%	703	7%	829	11%	901	5%	1,141	42%	988	7%
SR-47 eastbound between Harbor Boulevard ramps	1,452	11%	1,629	9%	1,694	22%	1,874	13%	2,427	42%	1,864	16%
SR-47 eastbound on-ramp from Harbor Boulevard	510	2%	481	8%	561	11%	620	7%	1,080	4%	832	3%
SR-47 eastbound east of Harbor Boulevard	1,962	9%	2,110	9%	2,255	19%	2,255	19%	3,507	31%	2,696	12%
SR-47 westbound east of Harbor Boulevard	2,908	9%	2,985	9%	3,335	23%	3,776	7%	4,491	32%	4,728	8%
SR-47 westbound off-ramp to Harbor Boulevard	371	6%	328	7%	612	23%	789	10%	891	28%	1,267	6%
SR-47 westbound between Harbor Boulevard ramps	2,537	9%	2,657	9%	2,723	23%	2,987	6%	3,600	33%	3,461	8%
SR-47 westbound on-ramp from Harbor Boulevard	579	0%	441	2%	686	13%	711	10%	1,601	27%	1,152	7%
SR-47 westbound west of Harbor Boulevard	3,116	8%	3,098	8%	3,409	21%	3,698	7%	5,201	31%	4,613	8%
SR-47 westbound to I-110 southbound (Gaffey Street)	1,259	2%	781	2%	1,218	5%	942	1%	1,462	4%	1,459	1%
SR-47 westbound to I-110 northbound	1,857	12%	2,317	10%	2,191	30%	2,756	9%	1,857	12%	2,317	10%

Source: *Traffic Study Report for the State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration* (January 2018).
I = Interstate
SR = State Route

Table 1.2 provides LOS for project area intersections for the existing year (2015), opening year (2023), and future year (2045) No Build conditions on SR-47 during the a.m. and p.m. peak hours. Existing Baseline (2015) conditions result in LOS C at Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street, one of two intersections in the project limits (Table 1.2). The LOS at the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection would continue to deteriorate under the No Build condition to an LOS D during both peak-hour periods by the opening year (2023) and to an LOS F during both peak-hour periods by the future year (2045).

Table 1.3 provides the LOS for the freeway mainline, ramp, and weaving segments for the existing year (2015), opening year (2023), and future year (2045) No Build conditions on SR-47 during the a.m. and p.m. peak hours. Existing Baseline conditions (2015) show all study area freeway segments currently operate at acceptable LOS in both directions during both peak-hour periods and that only the SR-47 westbound off-ramp to Harbor Boulevard operates at LOS D during both peak-hour periods; all of the other freeway segments operate at LOS C or better in the project area. However, LOS would continue to deteriorate under the No Build condition; the SR-47 westbound off-ramp to Harbor Boulevard would worsen to LOS E during the p.m. peak hour and SR-47 westbound east of Harbor Boulevard (mainline) would increase to LOS D during both peak-hour periods by the build-out opening year (2023). By the future year (2045) condition, all of the freeway segments except one (SR-47 eastbound between Harbor Boulevard ramps) operate at LOS D or worse during one or both peak-hour periods.

Four of the project area segments would operate at LOS E and F during the a.m. and/or p.m. peak hours by 2045 under the No Build condition. Implementation of the proposed improvements would improve the overall operation and ramp merge/ diverge and weaving movements on the portion of SR-47 within the project area during both the a.m. and p.m. peak hours.

Table 1.2: Existing (2015) and Forecast Years (2023 and 2045) No Build Alternative Levels of Service

Freeway Segment	Existing (2015)				Opening Year (2023)				Future Year (2045)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
Mainline												
SR-47 eastbound between Harbor Boulevard ramps	12.4	B	13.9	B	14.5	B	15.4	B	22.6	C	15.5	B
SR-47 eastbound east of Harbor Boulevard	16.8	B	18.0	C	19.0	C	20.2	C	28.7	D	22.0	C
SR-47 westbound east of Harbor Boulevard	25.1	C	25.9	C	30.0	D	32.2	D	**58.7**	**F**	**50.1**	**F**
SR-47 westbound between Harbor Boulevard ramps	21.7	C	22.8	C	23.4	C	23.8	C	**36.1**	**E**	28.7	D
Ramp												
SR-47 eastbound on-ramp from Harbor Boulevard	20.6	C	22.1	C	23.0	C	24.3	C	32.7	D	25.7	C
SR-47 westbound off-ramp to Harbor Boulevard	29.3	D	30.0	D	33.4	D	**35.1**	**E**	**46.3**	**F**	**43.7**	**F**
Weaving												
SR-47 eastbound between I-110 northbound on-ramp and Harbor Boulevard off-ramp	16.5	B	17.0	B	18.5	B	19.8	B	32.4	D	20.9	C
SR-47 westbound between Harbor Boulevard on-ramp and I-110 northbound off-ramp	19.4	B	18.9	B	21.4	C	21.5	C	**36.7**	**E**	28.2	D

Source: *Traffic Study Report for the State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration* (January 2018).
Notes: Density = passenger car per mile per lane.
Bolded cells indicate LOS E or F.
I = Interstate
LOS = level(s) of service
SR = State Route

Table 1.3: Existing (2015) and Forecast Years (2023 and 2045) No Build Alternative Intersection Levels of Service

Intersection	Existing (2015)				Opening Year (2023)				Future Year (2045)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Front Street and Knoll Drive/WBCT Gate 2	3.4	A	11.5	B	8.2	A	9.1	A	11.5	B	7.8	A
Front Street/Harbor Boulevard and SR-47 Ramps/Swinford Street	31.3	C	28.7	C	39.0	D	37.2	D	**239.3**	**F**	**103.6**	**F**

Source: *Traffic Study Report for the State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration* (January 2018).
Notes: Delay = Average Vehicle Delay (second).
Bolded cells indicate LOS E or F.
LOS = level(s) of service
SR = State Route
WBCT = West Basin Container Terminal

Accidents and Safety Within the Corridor

Collision data was gathered from Caltrans and the City of Los Angeles for the periods of January 1, 2015 to December 31, 2017 and January 1, 2013 to December 31, 2015, respectively. As shown in Table 1.4, 51 freeway accidents occurred within the SR-47 project limits, including the on- and off-ramps. The majority of the accidents (78 percent) occurred on the SR-47 mainline, while 22 percent occurred at the on- and off-ramps. Approximately 67 percent of the accidents on two of the three northbound/ eastbound freeway segments were a hit-object-type collisions; the rest of them were sideswipe collisions. On one of the three southbound/westbound freeway segments, approximately 67 percent of the accidents were rear-end collisions and on another of the three southbound/westbound freeway segments, approximately 50 percent of the accidents were sideswipe collisions and the other 50 percent were broadside collisions. Table 1.3 also shows that the total accident rates at all of the mainline locations are higher than the statewide averages for similar facilities. In contrast, the total accident rates for the analyzed ramps are lower than the statewide average for similar facilities.

Rear-end collisions are typically related to traffic congestion in chokepoint areas and are associated with sudden attempts to stop when traffic volumes exceed the capacity of the road. The majority of sideswipe accidents can usually be attributed to lane weaving. The improvements to the SR-47 interchange include moving the westbound off-ramp to the north, thereby eliminating the arterial weaving condition at the ramp terminus intersection. The proposed design would provide sufficient storage for the eastbound off-ramp queues, potentially resulting in fewer rear-end collisions.

In addition, accident data from the Los Angeles Department of Transportation (LADOT) Collision Report Summary was collected for the study intersections within a three-year accident history from January 2013 to December 2015. As shown in Table 1.4, 25 accidents occurred at the study intersections. The majority of intersection accidents were hit-object-type collisions, followed by rear-end and then sideswipe-type collisions.

Table 1.4: Existing Year (2015) Traffic Accident Data

Freeway Segments	Post Miles	Number of Accidents	Accident Rates[1]			Statewide Average Accident Rates[1]		
		Total Accidents	Fatalities	Fatalities and Injuries	Total	Fatalities	Fatalities and Injuries	Total
Freeway Mainline								
SR-47 NB/EB	R000.000–R000.348	8	0.000	0.06	**0.05**	0.01	0.03	0.87
SR-47 NB/EB	R000.349–000.787	13	0.000	0.95	**3.07**	0.005	0.24	0.71
SR-47 NB/EB	000.788–000.857	7	0.000	0.50	**3.48**	0.005	0.26	0.76
SR-47 SB/WB	000.819–000.857	2	0.000	0.00	**1.79**	0.005	0.26	0.76
SR-47 SB/WB	R000.377–000.818	7	0.000	0.46	**1.62**	0.005	0.26	0.76
SR-47 SB/WB	R000.000–R000.376	3	0.060	0.12	**0.18**	0.007	0.32	0.87
Freeway Ramps								
SR-47 NB/EB off-ramp to Harbor Boulevard	N/A	3	0.000	0.11	0.32	0.003	0.12	0.37
SR-47 NB/EB on-ramp from Harbor Boulevard	N/A	3	0.000	0.35	0.53	0.001	0.23	0.67
SR-47 SB/WB off-ramp to Harbor Boulevard	N/A	2	0.000	0.00	0.23	0.003	0.15	0.45
SR-47 SB/WB on-ramp from Harbor Boulevard	N/A	3	0.000	0.00	0.51	0.002	0.21	0.60
Intersections								
Pacific Avenue and Front Street	N/A	9	–	–	–	–	–	–
Harbor Boulevard and Swinford Street	N/A	11	–	–	–	–	–	–
Front Street and Knoll Drive	N/A	5	–	–	–	–	–	–
Totals		**76**						

Source: Caltrans TASAS; Collision Data Reviewed: 01/01/2015 to 12/31/2017. LADOT Collision Report Summary; Collision Data Reviewed: 01/01/2013 to 12/31/2015.

[1] For mainline sections, the accident rate is the number of accidents per million vehicle-miles. For ramps, the accident rate is the number of accidents per million vehicles.

Bold indicates the actual accident rate higher than the average accident rate.

EB = eastbound
NB = northbound
SB = southbound
SR = State Route
WB = westbound

1.2.2.2 Roadway Deficiencies

The following existing nonstandard features are not consistent with the Caltrans *Highway Design Manual* (November 2017):

- Nonstandard merge, diverge, and weave length and design
- Nonstandard intersection design at an interchange

These existing deficiencies would be corrected by designing and constructing the project improvements, where possible, to the standards in the Caltrans *Highway Design Manual* (November 2017). Mandatory and advisory design exceptions are proposed for some of these deficiencies, as described later in this chapter.

The primary deficiency within the existing interchange configuration is the atypical alignment of the westbound SR-47 off-ramp that loops beneath the SR-47 mainline to join the eastbound SR-47 off-ramp at a shared exit terminus. This configuration creates operational issues caused by vehicles slowing and weaving on the ramp as they approach the terminus. Traffic routinely backs up on both exit ramps during peak periods. Queuing on the eastbound exit can extend into the freeway lanes.

The eastbound loop on-ramp has short acceleration and merging lengths (approximately 30 percent of standard lengths) due to the close proximity of the Vincent Thomas Bridge. Slow-moving traffic approaching from the loop must accelerate on an ascending grade to merge with faster-moving mainline traffic.

The westbound SR-47 on-ramp terminus is currently uncontrolled. A single left-turn pocket creates long queues on northbound Front Street as vehicles wait for gaps in southbound traffic to move onto the on-ramp, presenting operational concerns.

1.2.2.3 Social Demands and Economic Development

SCAG's regionally adopted growth projections in the 2016–2040 RTP/SCS indicate that continuing growth is forecast in Los Angeles County. The population of Los Angeles County is expected to increase at a rate of approximately 16 percent total between 2012 and 2040. Additionally, the number of households in Los Angeles County is expected to increase by approximately 21 percent total between 2012 and 2040. Forecasts also show an increase in employment of approximately 23 percent total between 2012 and 2040 (SCAG 2016b).

The *California County-Level Economic Forecast 2017–2050* (Caltrans 2017) also shows a declining unemployment rate for Los Angeles County, dropping from

approximately 4.9 percent in 2017 to a projected 4.3 percent in 2050. Additionally, job opportunities in the near term are projected to increase on average by 3.7 percent across all sectors of employment in Los Angeles County between 2017 and 2022 (Caltrans 2017). These trends indicate that the County must improve its vital transportation corridors (including SR-47) to meet existing and future transportation demands for employees. (Refer to Table 1.1 for the projected increase in peak-hour traffic volumes under the No Build Alternative through 2045.)

Although employment and population growth is anticipated in Los Angeles County, the City of Los Angeles' General Plan accounts for some of this anticipated growth in the project vicinity. The City's general plan land uses show opportunities for increased residential densities and expansion of the industrial land uses in the project area. Those areas include undeveloped parcels northwest of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. Overall, the City of Los Angeles' population is projected to increase approximately 20 percent by 2040, which is greater than the County's growth rate (16 percent) for the same period.

1.2.2.4 Legislation

Measure R

The SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange Project Approval/Environmental Documentation (PA/ED) is identified in the South Bay Highway Program (SBHP). SBHP is 30-year program partially funded with the Measure R half-cent sales tax approved by Los Angeles County voters in 2008. Measure R is expected to generate $40 billion in new local sales tax revenues over 30 years. SBHP is included in the Measure R Expenditure Plan that identifies the projects to be funded and additional fund sources that would be used to complete the projects. Measure R alone does not fully fund all projects. The Measure R Expenditure Plan devotes its funds to seven transportation categories, as follows: 35 percent to new rail and bus rapid transit projects; 3 percent to Metrolink projects; 2 percent to Metro Rail system improvement projects; 20 percent to carpool lanes; highways, and other highway-related improvements; 5 percent to rail operations; 20 percent to bus operations; and 15 percent for local City-sponsored improvements.

Prior to any approval and commencement of any Measure R project, any necessary environmental review required by CEQA shall be completed. SBHP is included in the 2016–2040 RTP/SCS and the associated Program Environmental Impact Report (EIR) prepared by SCAG.

1.2.2.5 Modal Interrelationships and System Linkages

SR-47 is an integral component of the transportation system in Los Angeles County. SR-47 is classified as an urban principal arterial, which carries the major portion of trips entering and leaving urban areas, as well as the majority of through movements desiring to bypass the central city. Principal arterials serve significant intra-area travel, such as between major inner city communities, central business district and residential areas, or major suburban centers.[1]

SR-47 is also a Terminal Access Route from Route 110 to the Vincent Thomas Bridge at Seaside Avenue and from Ocean Boulevard to SR-103. As a Terminal Access Route, SR-47 provides Surface Transportation Assistance Act truck access between National Network Routes or a freight terminal facility. SR-47 directly serves POLA and the Port of Long Beach. In addition, SR-47 provides a connection with several interstates and California State Routes: I-110, SR-103, I-405, and SR-91. Regionally, truck traffic in Southern California is expected to grow significantly through 2035, using an increasing share of the region's highway capacity. Truck vehicle miles traveled (VMT) on regional highways is projected to grow by 80 percent between 2008 and 2035, an increase from 6.8 percent to over 10 percent of total VMT (SCAG 2012).

In conjunction with trucks and seaports, rail is one of the major components of freight. Union Pacific (UP) Railroad and BNSF Railway (BNSF), in conjunction with the Alameda Corridor, serve the area near SR-47. Available freight facilities include the Intermodal Container Transfer Facility (ICTF) and the Alameda Corridor together with several truck routes in the area (Caltrans 2015).

Front Street/Harbor Boulevard within the project area is also part of the POLA Heavy Container Corridor, an integral part of the port-related mobility. The heavy container corridor was created to aid in the movement of overweight 40-foot or larger ocean-going containers on designated city streets in and around POLA (LAHD 2018).

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[1] Caltrans. *About the Function Classification System*. Website: http://www.dot.ca.gov/hq/tsip/hseb/func/about_the_functional_classification_system.pdf (accessed January 17, 2018).

1.2.2.6 Independent Utility and Logical Termini

Federal regulations (Code of Federal Regulations [CFR] Title 23, Part 771.111 [f]) require that "independent utility" and "logical termini" be established for a transportation improvement project evaluated under NEPA. The following discusses the specific criteria listed in 23 CFR 771.111(f) and how the proposed project satisfies these criteria in separate analysis:

a) *Connect logical termini and be of sufficient length to address environmental matters on a broad scope;*

b) *Have independent utility or independent significance (be usable and require a reasonable expenditure event if no additional transportation improvements in the area are made); and*

c) *Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.*

The proposed project's limits were defined based on providing a logical and independent set of improvements. Logical termini are defined as rational end-points for transportation improvement and analysis of the potential environmental impacts of a proposed project. A project is defined as having independent utility if it meets the project purpose in the absence of other improvements in the project limits or in other parts of the corridor.

Logical Termini

The Build Alternative provides logical termini for the proposed improvements to the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange because it connects to other major transportation facilities (including Front Street/ Boulevard, which connects to POLA facilities such as cruise and cargo terminals and an auxiliary lane for the northbound I-110 connector), which themselves are destinations for major traffic volumes. The improvements for the Build Alternative terminate at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange on- and off-ramps and just north of the Knoll Drive and Front Street intersection relocation.

Independent Utility

The proposed project would have independent utility. The ramp and intersection improvements included in the Build Alternative would provide benefits to the traveling public without requiring or being dependent on the provision of other improvements on SR-47 or other freeways or arterials. Those improvements would

benefit travelers as they enter/exit the freeway. The Build Alternative represents a reasonable expenditure even if no additional transportation improvements are made in the corridor. The Build Alternative improvements can be implemented in the absence of any other improvements, and they do not restrict consideration of alternatives for other reasonably foreseeable transportation improvements in the SR-47 corridor and other corridors within the project limits. Because the Build Alternative meets the project purpose in the absence of other improvements in the SR-47 corridor, the proposed project would have independent utility.

1.3 Project Description

This section describes the proposed action and project alternatives that were developed to meet the identified Purpose and Need of the project while avoiding or minimizing environmental impacts and right-of-way acquisitions. The alternatives include Alternative 1 (No Build Alternative) and Alternative 3 (Build Alternative).

The project is located in Los Angeles County at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, between PMs 0.3 and 0.8. Within the limits of the proposed project, SR-47 currently has four general-purpose lanes, with an existing interchange that has a westbound single-lane off-ramp, an eastbound single-lane off-ramp, a single-lane eastbound on-ramp, and a single-lane westbound on-ramp. The westbound on-ramp intersection is uncontrolled. The purpose of the proposed project is to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and to improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community.

1.3.1 Alternatives

The No Build Alternative and Build Alternative are evaluated in this environmental document and are described in this section. A second build alternative identified as Alternative 2 was considered but eliminated from further consideration (refer to Section 1.4, below).

The proposed project contains a number of standardized project features that are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are described below in Section 1.3.1.2 (Alternative 3, Preferred Alternative) and are addressed in more detail in the Environmental Consequences sections found in Chapter 2. In addition, for the purposes of consistency, these project features are

included in Appendix D, Avoidance, Minimization, and/or Mitigation Summary, and referenced in Chapter 2 of this Initial Study/Environmental Assessment (IS/EA), as applicable, as Project Features (PFs) (per the title of the subsection), and numbered. For example, a project feature applicable to water quality would be titled and listed as PF-WQ-1.

1.3.1.1 Alternative 1: No Build Alternative

The No Build Alternative would keep the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange in its present condition, with no additional through lanes or interchange improvements. The facility would remain as is, with the exception of other proposed projects that are either under development or currently under construction. Thus, the No Build Alternative would not address the existing operational issues caused by vehicle slowing and weaving, nor would it address the traffic that already routinely backs up on both exit ramps during peak periods and is expected to worsen with projected growth. Additionally, the No Build Alternative would not address the short acceleration/deceleration lanes, which currently reduce operational efficiency of the on- and off-ramps. Overall, the No Build Alternative would not modify the existing on- and off-ramps to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange and, therefore, would not improve goods movement and traffic circulation.

The No Build Alternative serves as the baseline against which to evaluate the effects of the Build Alternative.

1.3.1.2 Alternative 3: Build Alternative (Preferred Alternative)

Alternative 3 (the Build Alternative) proposes to reconfigure the existing interchange at SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard (Figure 1-3). The proposed improvements would eliminate a bottleneck condition at the shared off-ramp terminus by creating a new, separate terminus for the westbound ramps.

Ramp Improvements

Ramps within the project limits would be modified where needed to accommodate the additional general-purpose lane, as indicated in Table 1.5.

Ramp Metering

The existing entrance ramps include ramp metering systems, although they are currently not in use by request from LAHD. The proposed on-ramps are designed to accommodate ramp metering.



LEGEND

- Project Location
- Temporary Construction Easement
- Geometrics
- Cut/Fill
- Retaining Wall
- Existing Sound Walls

Surrounding Facilities

- K-9 Training Facility
- Knoll Hill Dog Park
- Sewer Pump Station
- Truck Inspection Facility
- West Basin Container Terminal Gate

- Active Waterfront Red Car
- Inactive Pacific Harbor Line

0 200 400 FEET

SOURCE: Bing Maps (2015); AECOM (11/2017)

I:\AEM1602\GIS\Ch1_Alternative3.mxd (5/18/2018)

FIGURE 1-3

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Build Alternative and Surrounding Facilities

07-LA-47 PM 0.3/0.8

EA No. 07-31850

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Table 1.5: Ramp Modifications Under the Build Alternative

Ramp	Existing Condition	Build Alternative
WB Harbor Boulevard off-ramp	Single-lane exit and ramp cross-section with three lanes at its terminus.	Two-lane exit with four lanes at its new ramp terminus (650 feet north of existing terminus).
WB Harbor Boulevard on-ramp	Single-lane entrance at a non-signalized intersection.	Two-lane entrance at signalized intersection (650 feet north of its existing terminus).
EB Harbor Boulevard off-ramp	One-lane exit and ramp cross-section with three lanes at its terminus.	Two-lane exit with four lanes at its terminus.
EB Harbor Boulevard on-ramp	One-lane entrance.	One-lane entrance with new ramp gore (200 feet west of existing location).
Knoll Drive (east end)	Existing signalized intersection at Front Street/West Basin Container Gate. One-way direction is EB.	Non-signalized intersection with Front Street (approximately 250 feet north of its existing intersection). One-way direction is changed to WB.

EB = eastbound
WB = westbound

California Highway Patrol Enforcement Areas

Enforcement areas and maintenance pullouts are not currently included as part of the project design. However, these areas would be identified during final design and placed as appropriate.

Other Improvements

- Four storm water Best Management Practices (BMPs), three bioswales, and one detention device are proposed at locations within the interchange area.
- Improvements along Front Street/Harbor Boulevard would include the following updated bicycle and pedestrian facilities:
  - Five-foot-wide bike lanes along each side of Front Street and Harbor Boulevard within the project limits
  - Six-foot-wide sidewalks along each side of Front Street and Harbor Boulevard from the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection (i.e., the southern project limits) to the proposed westbound ramp intersection
  - Americans with Disabilities Act (ADA) compliant curb ramps and crosswalks at all four legs of the proposed westbound ramp intersection and all but the south leg of the eastbound terminal intersection
  - Updated bicycle and pedestrian facilities that would also tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project, which is for a separate bike and pedestrian walkway along the east side of Front Street

- Improvements along Front Street/Harbor Boulevard, which would also include additional turn lanes at the ramp terminus intersections

Utilities

During construction, all utilities within the freeway right-of-way and beneath or along Front Street/Harbor Avenue or adjacent properties would be protected in place or relocated. During final design, the Project Engineer would coordinate with each utility provider to finalize the exact location of that utility's facilities, assess whether the facilities can be protected in place during construction or would require relocation, and review the project plans for protection in place/relocation of the facility with the utility provider prior to construction. The potential utility relocations and/or protection in place for the Build Alternative are listed in Table 1.6. Permanent utility easements would be identified during final design.

Design Exceptions (Advisory and Mandatory)

The Build Alternative would include a total of 27 nonstandard features and require 17 bold exceptions and 10 underlined exceptions. Design exceptions are necessary when the proposed design deviates from the standard design features stipulated in the Caltrans *Highway Design Manual* (November 2017). For example, nonstandard curve radii are proposed, as otherwise the Build Alternative would result in extensive right-of-way impacts. Additionally, some existing nonstandard shoulder and median widths are also proposed to remain.

Project Features

The Build Alternative includes the following standardized measures that are included as part of the project description. Standardized measures (such as BMPs) are those measures that are generally applied to most or all Caltrans projects. These standardized or pre-existing measures allow little discretion regarding their implementation and are not specific to the circumstances of a particular project. More information on each measure was considered in the environmental analysis is provided in the applicable sections of Chapter 2.

PF-UES-1: Utility relocation plans will be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in-place.

PF-UES-2: The contractor will coordinate all temporary ramp and arterial roadway closures and detour plans with law enforcement, fire protection, and emergency medical service providers.

Table 1.6: Potential Utility Relocations Under the Build Alternative

Utility Provider and Facility Type	Description of Facility
Los Angeles Department of Water and Power Water Lines and Fire Hydrants	Fire hydrant
	6-inch water lateral
	10-inch and 12-inch water laterals
	6-inch water lateral
	4-inch and 6-inch water laterals
	12-inch water lateral
	12-inch water lateral
Los Angeles Department of Water and Power Above- and Below-Ground Transmission Lines	Power poles (2)
	Underground electrical line
	Underground electrical line
	Power poles (5)
	Power poles (9)
Southern California Gas Lines	2-inch gas line
	2-inch and 3-inch gas lines
	4-inch gas
City of Los Angeles Harbor Department and/or City of Los Angeles Storm Drains	Catch basin and 18-inch storm drain lateral
	24-inch storm drain pipe and catch basins
	24-inch storm drain pipe and catch basins
	24-inch storm drain pipe and catch basins
	18-inch storm drain pipe and catch basins
	18-inch and 24-inch storm drain pipe and catch basins
	24-inch and 30-inch storm drain pipe and catch basins
	Storm drain conveyance
	Storm drain conveyance
	18-inch storm drain pipeline
	18-inch storm drain pipelines and catch basins
	18-inch storm drain pipelines and catch basins
	Storm drainage natural watercourse
	12-inch, 14-inch, and 15-inch storm drain pipelines and catch basins
United States Navy Oil Pipelines	18-inch oil pipeline
	Two 24-inch oil pipelines
	Two 14-inch oil pipelines
	Two 14-inch oil pipelines
	Three 14-inch oil pipelines
Standard Oil Pipelines	18-inch oil line
City of Los Angeles Bureau of Engineering Sanitary Sewer Lines	42-inch sanitary sewer line
	18-inch sanitary sewer line
	33-inch sanitary sewer line
	Sanitary sewer pump station and 54-inch sanitary sewer line
	30-inch sanitary sewer force main
	12-inch and 15-inch sanitary sewer lines
	10-inch, 21-inch, and 24-inch sanitary sewer lines
Los Angeles Department of Transportation Communication Lines	32-inch communication line

Source: *Project Study Report* (2017).

PF-T-1: A Final Transportation Management Plan (TMP) will be developed in detail during final design.

PF-VIS-1: Damage to existing vegetation (especially mature, established trees) within or in close proximity to the project limits shall be minimized as much as possible.

PF-VIS-2: All areas disturbed by the proposed roadway improvements or grading operations will receive replacement planting where feasible.

PF-CR-1: If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor would divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. At that time, coordination would be occur with the appropriate local agency.

PF-CR-2: If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought to be Native American further provisions of California PRC 5097.98 are to be followed as applicable.

PF-WQ-1: The Build Alternative shall obtain coverage under the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]) Order No. 2009-0009-DWQ, as amended by 2010 0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002, or any other subsequent permit).

PF-WQ-2: Construction site dewatering shall comply with any orders that apply to groundwater discharges to surface waters within the coastal watersheds of Los Angeles and Ventura counties, depending on the nature of the groundwater.

PF-WQ-3: The Build Alternative shall comply with the provisions of the NPDES Permit, Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans) Order No. 2012-0011-DWQ, as amended by WQ 2014-0077-DWQ, NPDES No. CAS000003 (Caltrans Permit) or any subsequent permit.

PF-WQ-4: Caltrans-approved Design Pollution Prevention Best Management Practices (BMPs) shall be implemented to the maximum extent practicable (MEP), consistent with the requirements of the Caltrans Permit.

PF-WQ-5: Caltrans-approved Treatment BMPs shall be implemented to the MEP, consistent with the requirements of the Caltrans Permit.

PF-GEO-2: Revegetation of graded slopes should be performed to minimize erosion, and runoff should be diverted from each slope face using earthen berms and/or concrete swales at the top of each slope.

PF-HAZ-1: Prior to the completion of Plans, Specifications, and Estimates (PS&E), shallow subsurface soil sampling will be conducted for aerially deposited lead (ADL) in unpaved locations immediately adjacent to State Route (SR) 47 for ADL-related impacts.

The soil ADL evaluation and/or investigation will be consistent with the new California Department of Toxic Substances Control (DTSC) ADL Agreement contaminant concentration limits. In addition, new DTSC ADL Agreement soil reuse requirements and restrictions will apply.

PF-HAZ-2: During the design phase, the yellow traffic striping and pavement marking materials will be tested for lead and lead chromate. If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the California Department of Transportation (Caltrans) *Construction Manual* (July 2017), Chapter 7, Section 7-107, Hazardous Waste and Contamination.

PF-HAZ-3: Supplemental site investigations, including soil and groundwater investigations, will be performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels.

PF-HAZ-4: During construction, the construction contractor will monitor soil excavation for visible soil staining, odor, and the possible presence of unknown hazardous material sources. If hazardous material contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and to have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans *Construction Manual* (July 2017). Adequate protection to construction workers will be provided through the implementation of a Health and Safety Plan and a Soil Management Plan.

PF-AQ-1: Excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403.

PF-AQ-2: Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.

PF-AQ-3: All trucks that are to haul excavated or graded material on site will comply with California Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.

PF-AQ-4: The contractor will adhere to the California Department of Transportation (Caltrans) Standard Specifications for Construction, Sections 14.9-02 and 14-9.03.

PF-AQ-5: All construction vehicles both on and off site shall be prohibited from idling in excess of 5 minutes.

PF-N-1: The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, "Noise Control."

PF-BIO-1: To avoid impacts to nesting birds, any native or exotic vegetation removal or tree-trimming activities will occur outside the nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season, a preconstruction survey will be conducted by a qualified biologist within 3 days of commencement of vegetation removal or the beginning of construction activities to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist.

PF-BIO-3: The construction contractor shall inspect and clean construction equipment at the beginning of each day and prior to transporting equipment from one project location to another. Any plants removed or soil disturbed during the course of construction should be contained and properly disposed of off site. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and erosion-control Best Management Practices (BMPs) implemented will be free of invasive plant species seeds or propagules listed on the California Invasive Plant Council (Cal-IPC) Inventory. City tree planting and removal requirements will also be adhered to.

Right-of-Way Acquisition, Easements, and Temporary Construction Easements

Temporary construction easements (TCEs) are needed within the project limits. Staging for the proposed construction work would be located within these TCEs. Specific staging locations, as well as fill and borrow sites, would be determined by the construction contractor during the construction phase, but all staging locations would be within the project limits as described in this document. Overall, the proposed project would result in the need for 17 TCEs, 19 partial acquisitions, and 6 full acquisitions.

1.3.2 Project Costs

The estimated right-of-way and construction cost for the Build Alternative is approximately $30.9 million. As noted earlier, this project is anticipated to be constructed with Measure R funds and/or other State and federal funding sources.

1.3.3 Construction Schedule

Construction of the project would begin in 2021, with a construction duration of approximately 18 months. The majority of the work would be conducted during the day behind k-rails (temporary concrete barriers), with some supplemental work to be done at night. Much of the project improvements north of the SR-47 mainline may be constructed prior to any modification to the existing interchange. Grading Knoll Hill and construction of the realigned portion of Knoll Drive would ensure access to Knoll Hill is available throughout the remainder of construction. Next, the majority of the westbound ramps, including the terminus intersection, may be constructed outside the current freeway footprint. Access into the West Basin Container Terminal is likely required during construction, but coordination with LAHD staff may prioritize other container terminal gates to reduce traffic through the intersection during construction.

Overnight closures may be required during reconstruction of the westbound gores. Detours are available using Gaffey Street or John S. Gibson Boulevard interchanges. Once the westbound ramps are functioning, the existing westbound ramp may be removed and the new alignment for the eastbound on-ramp may be constructed. Once again, overnight closures for the eastbound on-ramp may be required for reconstruction of the gore area. Widening and reconstruction of the eastbound off-ramp should not require long-term temporary ramp closures. The contractor shall contact the respective Transportation Management Center (TMC) for Caltrans District 7 and the City of Los Angeles regarding the events taking place and coordinate timing for construction activities.

1.4 Identification of a Preferred Alternative

A Preferred Alternative was identified after considering all information in the IS/EA and technical studies. It was also based on input from the Project Development Team (PDT) members; public stakeholders; and federal, State, and local agencies during the project development process. Public outreach and coordination resulted in comments from the public and governmental agencies, all of which were carefully considered during the Preferred Alternative identification process. In addition, consideration was given to all issues raised during the public circulation period. After comparing and weighing the benefits and impacts of the Build Alternative and the No Build Alternative, the PDT has identified the Build Alternative as the Preferred Alternative.

The project was initiated to reduce congestion and improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, as well as to improve goods movement and traffic circulation

in the area in a manner that is sensitive to the needs of the local community. The Build Alternative meets the purpose and need identified for the project.

1.5 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Initial Study/Environmental Assessment

The PSR considered a second build alternative identified as Alternative 2. Alternative 2 considered ramp alignments and grade separations to avoid acquisition of the former Pacific Harbor Line right-of-way, as LAHD was considering a potential future use. LAHD has since determined that it is not necessary to preserve the right-of-way for future use. Consequently, Alternative 2 is no longer under consideration.

Additionally, TSM/TDM and mass transit were considered during design, but they do not meet the purpose and need of the project, which is to separate the off-ramps to solve the nonstandard weave length and design.

1.6 Permits and Approvals Needed

Table 1.7 lists the permits, licenses, agreements, and certifications required for project construction.

Table 1.7: Permits, Licenses, Agreements, and Certifications Needed

Agency	PLAC	Status
SWRCB	NPDES Construction General-Permit Order No. 2009-009-DWQ, Permit Order No. 2010-0014-DWG, and Permit Order No. 2012-0006-DWQ, NPDES No. CAS000002 (Section 402 of the CWA)	Application and Notice of Intent will be submitted prior to construction.
SWRCB	Los Angeles Region Dewatering Requirement General Discharge Permit Order No. R4-2013-0095 (NPDES No. CAG994004), Volatile Organic Compound Contaminated Sites Discharge Permit Order No. R-4-2013-0043 (NPDES No. CAG914001), and Petroleum Fuel-Contaminated Sites Discharge Permit Order No. R4-2013-0042 (NPDES No. CA834001)	If dewatering is required, the project should demonstrate that groundwater being discharged to surface waters does not contribute to an in-stream excursion above any applicable State or federal water quality objectives/criteria or cause acute or chronic toxicity in the receiving water.
RWQCB	NPDES Permit, Statewide Storm Water Permit, Waste Discharge Requirements for the State of California and Caltrans, Order No. 2012-0011-DWQ, as amended by WQ 2014-0077-DWQ, NPDES No. CAS000003	General discharge permit to be obtained prior to construction.
Caltrans	Construction Encroachment Permit	Application for a Caltrans construction encroachment permit will be submitted prior to construction if the contractor is procured by LAHD.
California Coastal Commission	Coastal Development Permit (CDP)	Application for a CDP will be submitted during final design.
City of Los Angeles	Construction Encroachment Permit	Application for a City of Los Angeles construction encroachment permit for temporary access onto public rights-of-way will be submitted prior to construction.
LAHD	CDP	Application for a CDP from LAHD will be submitted prior to any construction activities.

Caltrans = California Department of Transportation
CDP = Coastal Development Permit
CWA = Clean Water Act
FHWA = Federal Highway Administration
IS/EA = Initial Study/Environmental Assessment
NPDES = National Pollutant Discharge Elimination System
PLAC = Permits, Licenses, Agreements, and Certifications
LAHD = City of Los Angeles Harbor Department
RWQCB = Regional Water Quality Control Board
SWRCB = State Water Resources Control Board

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter describes the current condition of the resources in the study area and identifies the potential effects of implementing the State Route 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project (proposed project). Each subsection describes the present conditions, discusses the potential impacts of building the proposed project, and indicates what measures would be taken to avoid, minimize, or mitigate those impacts.

The environmental analysis contained within the following chapter considers the potential environmental consequences associated with implementation of the two proposed alternatives (the No Build Alternative and the Build Alternative). The following sections have been updated in response to comments received during the public review period of the Draft Initial Study/Environmental Assessment (IS/EA) or to reflect the Preferred Alternative:

- Section 2.1, Land Use
- Section 2.3, Community Impacts
- Section 2.13, Air Quality
- 2.14, Noise

The environmental impact analyses discuss potential impacts in three general categories: human environment, physical environment, and biological environment. The following discussion of potential effects is presented by environmental resource area. As part of the scoping and environmental analysis carried out for the proposed project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- **Wild and Scenic Rivers:** There is no potential for adverse impacts to wild and scenic rivers due to the absence of designated wild and scenic rivers in the study area.

- **Farmlands:** There is no land designated as prime farmland, unique farmland, or land of statewide or local importance within the study area. In addition, there is no property currently under Williamson Act contract within the study area.
- **Timberland:** There are no designated timberlands or properties with a California Timberland Productivity Act contract within the study area.
- **Threatened and Endangered Species:** According to the *Natural Environment Study* (March 2018), the Biological Study Area (BSA) does not contain suitable habitat for any threatened or endangered species. However, a species list was obtained and is included the *Natural Environment Study*. As stated in the *Natural Environment Study*, the effect finding for each threatened and endangered species and critical habitats listed in the USFWS and NOAA Fisheries Service species lists is "No Effect."

HUMAN ENVIRONMENT

2.1 Land Use

This section is based on a review of local planning documents and geographic information systems (GIS) land use data, as well as information from Section 2.3, Community Impacts.

2.1.1 Existing and Future Land Uses

The study area for the land use analysis includes the project area (the physical area that would be directly affected by the proposed project) and the adjacent neighborhoods within the City of Los Angeles (City) within a 0.5-mile buffer.

2.1.1.1 Existing Land Uses

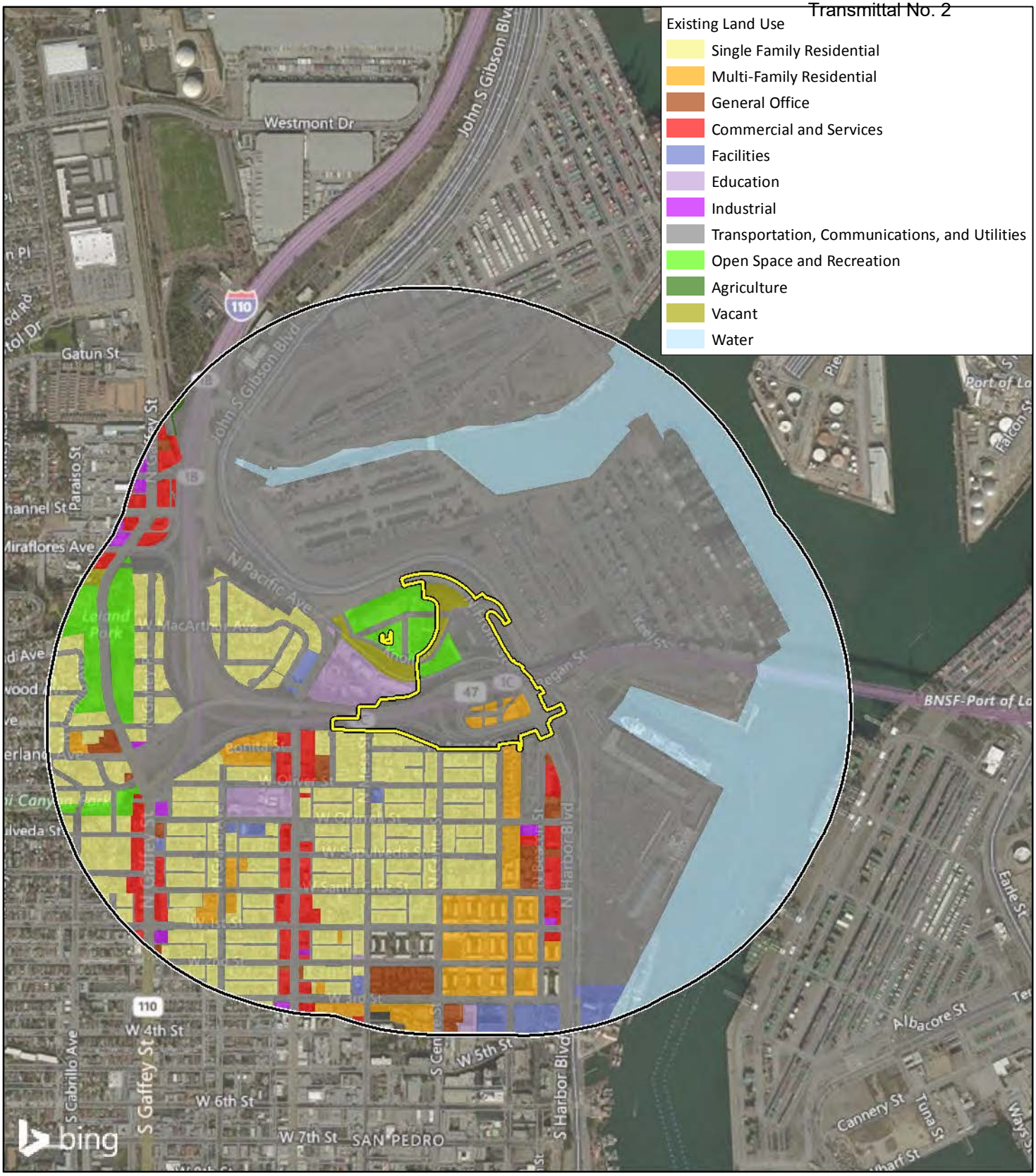
The existing land uses in the study area are shown on Figure 2.1-1. North of State Route (SR) 47, existing land uses are predominantly transportation, communications, and utilities (Port of Los Angeles [POLA] uses); land uses immediately adjacent to the north of the project area include open space and recreation, vacant, and education. South of SR-47, the existing land uses are multi- and single-family residential, commercial and services, transportation, communications, and utilities. The acreages and percentages of existing land uses in the study area are shown in Table 2.1.1.

Table 2.1.1: Existing Land Uses in the Land Use Analysis Study Area

Land Use	Acres	Percentage
Agriculture	0.4	0.0%
Commercial and Services	21.7	2.4%
Education	12.4	1.4%
Facilities	10.0	1.1%
General Office	10.0	1.1%
Industrial	2.9	0.3%
Multi-Family Residential	31.7	3.5%
Open Space and Recreation	23.4	2.6%
Single-Family Residential	111.3	12.1%
Transportation, Communications, and Utilities	533.6	58.2%
Unknown	5.4	0.6%
Vacant	5.6	0.6%
Water	148.6	16.2%
Total	**917.0**	**100.0%**

Source: Southern California Association of Governments (2012); compiled by LSA (2018).

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LEGEND

Project Location

Study Area

FIGURE 2.1-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Existing Land Use

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0 625 1250

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SOURCE: Bing Maps (2015); AECOM (11/2017); SCAG (2012)

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As indicated in Table 2.1.1, approximately 533.6 acres (approximately 58.2 percent) of the study area land use is transportation, communications, and utilities. As shown on Figure 2.1-1, transportation, communications, and utilities land uses are located to the north and east of the project area and along existing transportation networks surrounding the project area. Single-family residential uses (12.1 percent) and multi-family residential uses (3.5 percent)[1] are the second and third most common existing land uses, respectively, in the study area.

2.1.1.2 General Plan Land Uses

General Plan land use designations, which guide future development in a jurisdiction, are depicted on Figure 2.1-2 for the study area. In the study area and north of SR-47, the General Plan land use designations are predominantly transportation, communications, and utilities, followed by industrial, single-family residential, and facilities uses. South of SR-47, the predominant General Plan land use designations are multi-family residential and transportation, communications, and utilities, followed by commercial and services, general office, industrial, and facilities.

As shown in Table 2.1.2, transportation, communications, and utilities makes up the largest category of planned land uses within the study area (54.5 percent), followed by multi-family residential and industrial uses (13.6 percent and 6.3 percent, respectively).[2] The General Plan land use designations in the study area are inconsistent with the existing land uses. Residential uses are planned to shift from single-family (3.8 percent existing) to multi-family (13.6 percent planned) in the study area. Additionally, industrial land uses are planned to increase substantially from 0.3 percent to 6.3 percent within the study area.

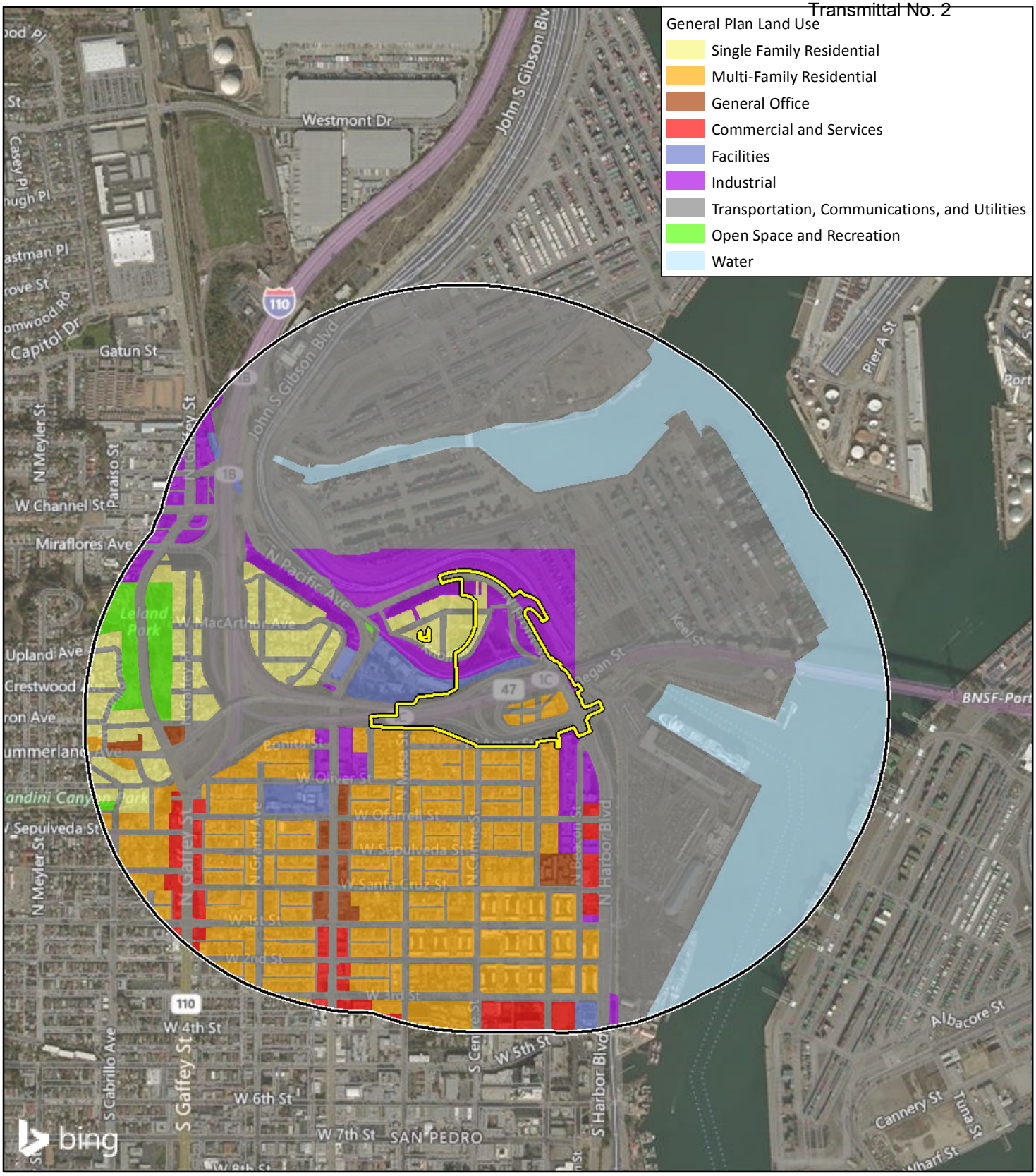
2.1.1.3 Development Trends

The City encompasses an area of 465 square miles and was incorporated on April 4, 1850 (City of Los Angeles 2017a and 2017b). The City's population in 2016 was approximately 4,040,904, compared to 3,694,742 in 2000. The City of Los Angeles' population growth rate from 2000 to 2016 was 9.4 percent, which is higher than the Los Angeles County (County) growth rate of 7.6 percent for the same period (Southern California Association of Governments [SCAG] 2017). Based on 2016 SCAG growth projections, employment in the City is projected to increase by

1 Excluding water (16.2 percent).

2 Ibid.

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LEGEND

Project Location

Study Area

FIGURE 2.1-2

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

General Plan Land Use

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SOURCE: Bing Maps (2015); AECOM (11/2017); SCAG (2012)

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Table 2.1.2: General Plan Land Uses in the Land Use Analysis Study Area

Land Use	Acres	Percentage
Commercial and Services	16.9	1.8%
Facilities	15.1	1.6%
General Office	8.5	0.9%
Industrial	57.3	6.3%
Multi-Family Residential	124.5	13.6%
Open Space and Recreation	12.1	1.3%
Single-Family Residential	35.1	3.8%
Transportation, Communications, and Utilities	498.6	54.5%
Water	148.4	16.2%
Total	**915.5**	**100.0%**

Source: Southern California Association of Governments (2012); compiled by LSA (2018).

28 percent from 2012 to 2040. During the same time period, SCAG projects that the City's population will increase from approximately 3,845,500 in 2012 to 4,609,400 in 2040 (SCAG 2016c).

According to the San Pedro Community Plan EIR, the population of the community of San Pedro was approximately 76,651 in 2010, compared to 76,173 in 2000. The 2030 population growth projection for San Pedro is 83,152. The community planning area provided approximately 13,307 jobs in 2005; this figure is anticipated to increase by approximately 50 percent to 19,917 jobs by 2030. Approximately 43,398 jobs are generated by the adjacent activities at the POLA marine terminals. It is estimated that about 13 percent of these jobholders are residents of San Pedro. Therefore, it is estimated that approximately 87 percent of the POLA jobholders are commuting from outside of the community of San Pedro (City of Los Angeles 2012).

Approved and planned projects in the study area are described in Table 2.20.1 and shown on Figure 2.20-1 in Section 2.20, Cumulative Impacts.

2.1.1.4 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

Construction of the Build Alternative would require temporary construction easements (TCEs) predominantly north of SR-47 to allow access for the construction of retaining walls, and roadway widening and realigning. The locations of the parcels that would be affected by these TCEs are shown on Figure 2.3-3 in Section 2.3, Community Impacts. The largest TCEs are located north of and adjacent

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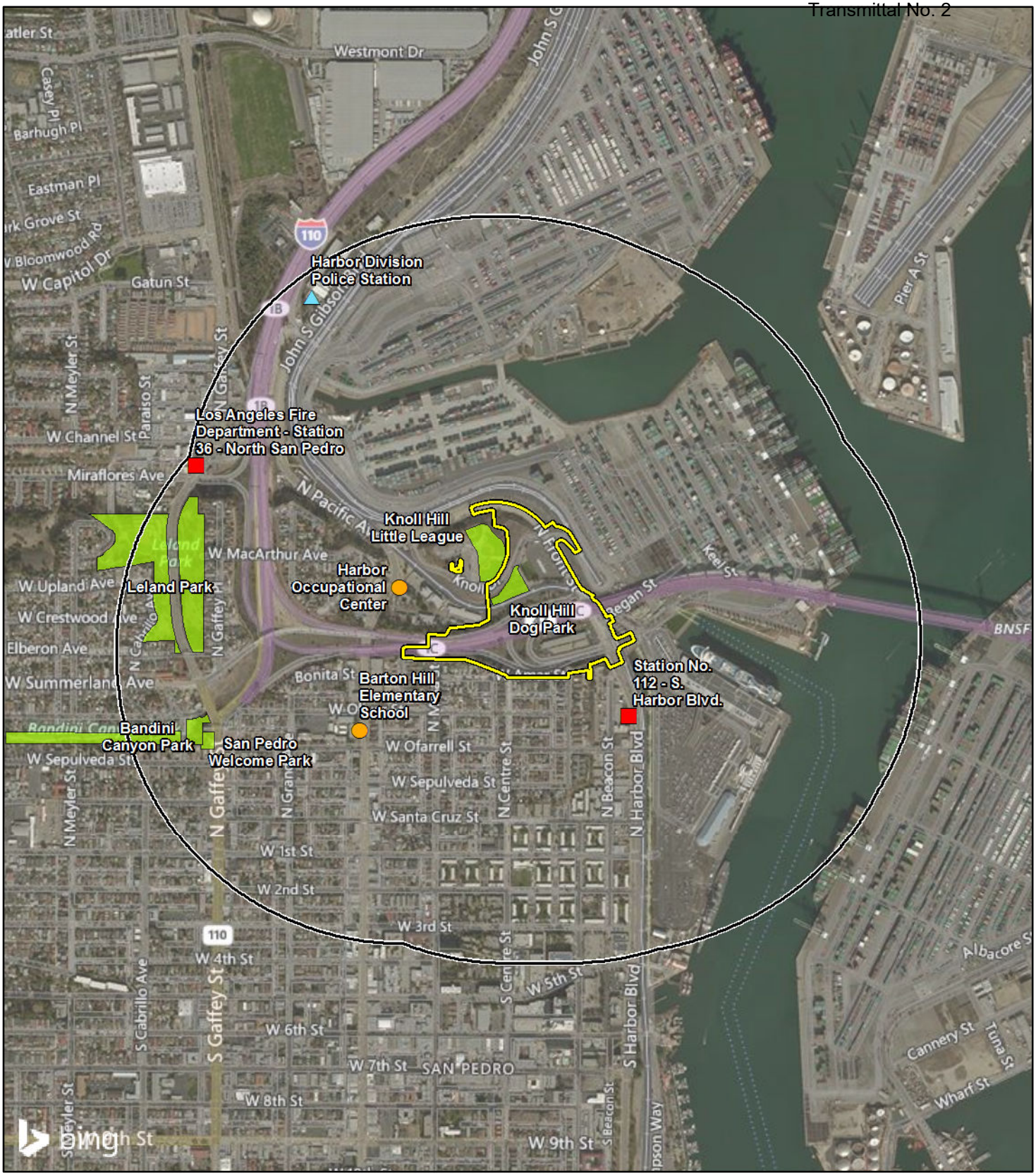


FIGURE 2.1-3

LEGEND

- Project Location
- Study Area
- Schools
- Police Station
- Fire Station
- Recreation and Parks

0 625 1250
FEET

SOURCE: Bing Maps (2015); AECOM (11/2017)

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SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Parks and Community Facilities

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to Knoll Drive, as well as south of Knoll Drive, between the proposed realigned westbound (WB) on- and off-ramps and north of the existing SR-47 WB on-ramp. TCEs are also required adjacent to and east of Front Street and Harbor Drive, as well as south of and along the SR-47 eastbound (EB) off-ramp. Staging activities may result in temporary increases in dust and noise levels in the vicinity of these staging areas; however, such activities are not anticipated to interfere with existing uses on the parcels or result in land use conflicts with adjacent businesses and residences near SR-47. These impacts would be temporary and would cease when the project construction is complete.

Vacant land, open space and recreation, and transportation, communications, and utilities uses make up the greatest share of existing land uses that would be impacted by TCEs. As shown in Table 2.1.3, the Build Alternative would result in the use of approximately 0.67 acre of open space and recreation; approximately 4.09 acres of existing transportation, communications and utilities; and approximately 0.93 acre of existing vacant uses.

Table 2.1.3: Existing Land Use Impacts

Impact Type	Land Use	Build Alternative
Permanent Impacts	Education	0.02
	Open Space and Recreation	0.91
	Vacant	1.32
	Permanent Impacts Total	**2.25**
TCEs	Education	1.25
	Open Space and Recreation	0.67
	Transportation, Communications, and Utilities	4.09
	Vacant	0.93
	TCE Total	**6.94**

Source: Southern California Association of Governments (2012); compiled by LSA (2018).
TCE = temporary construction easement

The Build Alternative would require 17 TCEs in the project area (refer to Table 2.3.9 in Section 2.3, Community Impacts). The TCEs generally consist of land that is currently used for landscaping, unimproved areas at the perimeter of parcels, parking areas, or vacant land.

Additionally, as described in Section 2.3, Community Impacts, the LAHD police dog training facility would be relocated, the Knoll Hill Dog Park would be acquired, and the LAHD Truck Inspection Facility would be reconfigured within the remaining POLA property under the Build Alternative because portions of this land are within

the locations proposed for the construction of the proposed on- and off-ramp facilities. Following the reconfiguration of the LAHD Truck Inspection Facility, the property on which it is located is proposed to be used for construction staging. The Build Alternative would also require temporary ramp closures in the project area (as described in Section 1.3.3).

Upon completion of the proposed project, areas that are temporarily disturbed by construction activities would be returned to their property owners in the same or better condition. Therefore, the temporary use of land during construction of the Build Alternative would not result in substantial adverse land use and/or compatibility effects.

Generally, ramp closures would occur primarily during off-peak and overnight hours, minimizing delays to the traveling public and local business operations. Any partial interchange closures would occur primarily at night and on weekends to minimize delays to the traveling public. Access to all nearby businesses and parks would be maintained during any ramp closures through the identification of detour routes on alternate freeway on- and off-ramps and local streets. Although construction of the proposed project would not substantially interfere with any adjacent land uses, there would be traffic-related inconveniences due to construction-related delays, temporary closures, and construction equipment operations. Full and partial closures would be coordinated with local jurisdictions as outlined in the Draft Transportation Management Plan (Project Feature PF-T-1 in Section 2.5.3.1).

No Build Alternative

The No Build Alternative would not result in the construction of any improvements to the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange area other than routine maintenance. As a result, the No Build Alternative would not result in temporary adverse effects related to existing and planned land uses.

Permanent Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would require the permanent conversion of current and planned non-transportation land uses to transportation uses to accommodate the proposed project improvements. As shown in Table 2.1.3, above, the Build Alternative would result in the conversion of the following existing land uses to transportation uses: education (0.02 acre), open space and recreation (0.91 acre), and vacant (1.32 acres). This would result in an increase in 2.25 acres of transportation, communication, and

utilities land uses. As shown in Table 2.1.4, the Build Alternative would result in the conversion of the following planned land uses to transportation uses: facilities (0.52 acre) and industrial (3.61 acres). This would result in an increase in 4.13 acres of transportation, communication, and utilities land uses.

Table 2.1.4: General Plan Land Use Impacts

Impact	Land Use	Build Alternative
Permanent Impacts	Facilities	0.52
	Industrial	3.61
Permanent Impacts Total		**4.13**

Source: Southern California Association of Governments (2012); compiled by LSA (2018).

All of the proposed property acquisitions are situated adjacent to existing transportation, communications, and utilities land uses (POLA uses) and commercial and open space and recreation land uses (residential communities) that would benefit from increased freeway accessibility and improved circulation in their vicinity. Because the Build Alternative would impact freeway-adjacent properties, improve freeway operations, and reduce traffic congestion in the area, the land use compatibility impacts are not considered to be substantial.

Some of the partial acquisitions may result in the loss of landscaping or setbacks, or in noncompliance with other development standards on the remaining lot. As part of the acquisition process, coordination with the property owner and the local jurisdiction would be undertaken to address any variances needed resulting from noncompliance with development standards.

No Build Alternative

The No Build Alternative would not result in any improvements on SR-47 within the study area. As a result, the No Build Alternative would not result in permanent impacts related to existing and planned land uses.

2.1.1.5 Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in substantial permanent effects related to plan consistency, land use compatibility, or community facilities and services. No additional measures or mitigation are required.

2.1.2 Consistency with State, Regional, and Local Plans and Programs

This section discusses the proposed project's consistency with the SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the SCAG 2017 Federal Transportation Improvement Program (FTIP), the General Plan of the City of Los Angeles, the San Pedro Community Plan, the POLA Port Master Plan, and the Pacific Corridor Master Plan.

2.1.2.1 SCAG Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the metropolitan planning organization for six counties and 187 cities. SCAG prepares long-range planning documents guiding responses to regional challenges in the areas of transportation, air quality, housing, growth, hazardous waste, and water quality. Because these issues cross city and county boundaries, SCAG works with cities, counties, and public agencies in the six-county region (i.e., Los Angeles, Orange, Ventura, San Bernardino, Riverside, and Imperial counties) to develop strategies to specifically address the growth and transportation issues facing southern California.

The 2016–2040 RTP/SCS was adopted by SCAG on April 2016 and last amended (Amendment No. 2) in July 2017. SCAG's 2016–2040 RTP/SCS places a greater emphasis on sustainability and integrated planning than previous RTPs and defines three principles that guide future development in the six-county region: mobility, economy, and sustainability. SCAG updates the RTP/SCS every four years. Improvements to SR-47, including the proposed project (RTP ID 1120007), are listed in the 2016–2040 financially constrained project list of the RTP/SCS as amended by Final Amendment #2, which was approved on July 6, 2017 (SCAG 2017b).

2.1.2.2 SCAG Federal Transportation Improvement Program

The FTIP is a listing of all capital transportation projects proposed over a six-year period for the SCAG region. The FTIP is prepared to implement the projects and programs listed in the RTP and is developed in compliance with State and federal requirements. A new FTIP is prepared and approved every two years. These funded projects include highway improvements; transit, rail, and bus facilities; carpool lanes; signal synchronization; intersection improvements; freeway ramps; and other related improvements.

Federal law requires that all federally funded projects and regionally significant projects (regardless of funding) must be listed in an FTIP. Improvements to SR-47, including the proposed project (FTIP LA0G1290), are listed in Amendment 17-02 of the 2017 FTIP (SCAG 2016a), which was approved by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) on February 21, 2017.

2.1.2.3 Local Plans

Refer to Table 2.1.5 for an analysis of the consistency of the proposed project with the local planning documents.

City of Los Angeles General Plan

General Plans contain policies that guide land use-related decisions within a city and address issues that directly and indirectly influence land uses within its elements (e.g., Housing, Noise, Mobility, Safety, Conservation, Open Space, and Transportation). Relevant mobility, conservation, open space, and land use policies in the City's General Plan are described below. The Land Use Element of the General Plan is divided into 35 Community Plans for the purpose of developing, maintaining, and implementing the General Plan. The Port of Los Angeles Plan (1982) is one of these 35 Community Plans and provides a 20-year official guide to the continued development and operation of the Port. In addition, relevant land use policies from the San Pedro Community Plan are discussed. Refer to Table 2.1.5 for an analysis of the consistency of the proposed project with the City of Los Angeles General Plan.

San Pedro Community Plan

The San Pedro Community Plan Area (CPA) is located on the Palos Verdes Peninsula near the terminus of the Harbor Freeway (Interstate [I] 110) in the southernmost portion of the City. The CPA is generally bounded by the communities of Wilmington-Harbor City to the north and northeast, POLA to the east, the Pacific Ocean to the south, and the City of Rancho Palos Verdes to the west. Refer to Table 2.1.5 for an analysis of the consistency of the proposed project with the San Pedro Community Plan.

Port of Los Angeles Port Master Plan

The Port Master Plan (LAHD 2014) serves as a long-range plan to establish policies and guidelines for future development at POLA. Relevant goals and policies in the Port Master Plan and an analysis of their consistency with the proposed project are included in Table 2.1.5.

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
City of Los Angeles General Plan		
Mobility Element (2016)		
Policy 1.2 Complete Streets: Implement a balanced transportation system on all streets, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all users.	**Inconsistent.** The No Build Alternative would not improve conditions at the SR 47/Vincent Thomas Bridge and Front Street/ Harbor Boulevard interchange, and therefore would not provide necessary facilities to implement complete streets.	**Consistent.** The proposed project would help to implement a balanced transportation system by modifying and improving existing interchange infrastructure, which would include updated and new, controlled intersections, and bicycle and pedestrian facilities. This would improve safety and access for all users.
Policy 1.7 Regularly Maintained Streets: Enhance roadway safety by maintaining the street, alley, tunnel, and bridge system in good to excellent condition.	**Consistent.** The No Build Alternative would maintain the existing roadway; however, it would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange.	**Consistent.** The Build Alternative would modify and improve existing interchange infrastructure to increase safety and address operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange.
Policy 1.8 Goods Movement Safety: Ensure that the goods movement sector is integrated with the rest of the transportation system in such a way that does not endanger the health and safety of residents and other roadway users.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/ Harbor Boulevard interchange.	**Consistent.** The Build Alternative would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities to improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community.
Policy 2.1 Adaptive Reuse of Street: Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and therefore would not provide necessary infrastructure to adapt to future demands.	**Consistent.** The Build Alternative would modify and improve the existing interchange, including by reusing space previously occupied by the existing WB off-ramp and updating bicycle and pedestrian facilities, to improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community.
Policy 2.3 Pedestrian Infrastructure: Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, which include the uncontrolled SR-47 WB on-ramp intersection.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities that would integrate with LAHD's Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project.

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
Policy 2.6 Bicycle Networks: Provide safe, convenient, and comfortable local and regional bicycling facilities1[1] for people of all types and abilities.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, which include the uncontrolled SR-47 WB on-ramp intersection.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities that would tie into LAHD's Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project.
Policy 2.7 Vehicle Network: Provide vehicular access to the regional freeway system.	**Consistent.** The No Build Alternative would continue to provide vehicular access to the regional freeway system; however, it would not improve access.	**Consistent.** The proposed project would modify the existing on- and off-ramps to improve safety, access, and efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. This would improve goods movement and traffic circulation.
Policy 2.8 Goods Movement: Implement projects that would provide regionally significant transportation improvements for goods movement.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/ Harbor Boulevard interchange. Therefore, the No Build Alternative would not implement projects that would provide regionally significant transportation improvements for goods movement.	**Consistent.** The proposed project would modify the existing on- and off-ramps to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. This would improve goods movement and traffic circulation.
Policy 2.9 Multiple Networks: Consider the role of each enhanced network when designing a street that includes multiple modes.	**Inconsistent.** The No Build Alternative would not enhance the multiple modes of transportation currently existing within the project area.	**Consistent.** In addition to modifying the existing on- and off-ramps to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, the proposed project would also include updated and new, controlled intersections, and bicycle and pedestrian facilities.
Policy 2.13 Highway Preservation and Enhancement: Support the preservation and enhancement of the state highways consistent with the RTP/SCS and the goals/policies of the General Plan.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. Therefore, the No Build Alternative would not enhance State highways consistent with the RTP/SCS and the goals/policies of the General Plan.	**Consistent.** The proposed project is included in the SCAG 2016–2040 RTP/SCS and would modify and improve safety, access, and the efficient operation of the SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange consistent with the goals/policies of the City's General Plan.

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
Policy 2.16 Scenic Highways: Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.	**Consistent.** The No Build Alternative would maintain Front Street in its existing condition; however, it would not enhance a scenic highway.	**Consistent.** The City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. The proposed project would include updated and new, controlled intersections, and bicycle and pedestrian facilities that would tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project, thereby enhancing the scenic highway.
Policy 3.1 Access for All: Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes - including goods movement – as integral components of the City's transportation system.	**Inconsistent.** The No Build Alternative would maintain the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange in its existing condition; however, it would not improve goods movement and all modes of traffic circulation in the area.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities, which would improve goods movement and all modes of traffic circulation in the area.
Policy 3.2 People with Disabilities: Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.	**Consistent.** The No Build Alternative, unlike the Build Alternative, would not result in any improvements to accommodate the needs of people with disabilities. However, the No Build Alternative would not result in any modifications or install any infrastructure; therefore, this policy would not be applicable.	**Consistent.** ADA-compliant curb ramps and protected crosswalks are proposed across all directions of the new WB terminus intersection and along three directions of the existing EB terminus.
Policy 4.11 Cohesive Regional Mobility: Communicate and partner with the Southern California Association of Governments (SCAG), Los Angeles County Metropolitan Transportation Authority (Metro), and adjacent cities and local transit operators to plan and operate a cohesive regional mobility system.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/ Harbor Boulevard interchange. Therefore, the No Build Alternative would not provide the necessary improvements to operate a cohesive regional mobility system.	**Consistent.** The proposed project is a cooperative effort among LAHD, the City, and Caltrans to improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. This would include improvement of goods movement and regional transportation.
Policy 5.1 Sustainable Transportation: Encourage the development of a sustainable transportation system that promotes environmental and public health.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/ Harbor Boulevard interchange. Therefore, the No Build Alternative would not encourage the development of a sustainable transportation system that promotes environmental and public health.	**Consistent.** The proposed project would modify and improve the existing interchange, including utilizing space previously occupied by the existing WB off-ramp and updating bicycle and pedestrian facilities to improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community, including the need for improved safety and access.

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
Open Space Element (1973)		
Policy: Scenic corridors should be established where designated. Each corridor should be specifically "tailored" to the needs of the area and the scenic values to be preserved. Specific studies including implementing ordinances should be prepared for each scenic corridor.	**Inconsistent.** The No Build Alternative would maintain the existing scenic corridor in its current state; however, it would not tailor to the needs of the area and the scenic values to be preserved.	**Consistent.** The City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. The proposed project would include updated and new, controlled intersections, and bicycle and pedestrian facilities that would tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project. Therefore, the proposed project would enhance the scenic highway.
Policy: The provision of malls, plazas, green areas, etc., in structures or building complexes and the preservation and provision of parks shall be encouraged.	**Consistent.** The No Build Alternative would maintain the existing roadway and would not impact any parks.	**Consistent.** The proposed project would realign the east end of Knoll Drive to meet Front Street approximately 250 feet north of the new WB ramp intersection and the one-way direction of Knoll Drive would be changed to WB. However, this would not permanently impact Knoll Hill Little League fields.
Policy: Open space lands uses held by the public for recreational use should be accessible and should be provided with essential utilities, pubic facilities and services.	**Consistent.** The No Build Alternative would not impact open space and recreation land uses.	**Consistent.** The proposed project would realign the east end of Knoll Drive to meet Front Street approximately 250 feet north of the new WB ramp intersection and the one-way direction of Knoll Drive would be changed to WB. However, this would not permanently impact Knoll Hill Little League fields.
San Pedro Community Plan (2017)		
LU13.1 Governmental coordination: Strengthen governmental inter-agency coordination in the planning and implementation of Port projects in order to better serve the interests of the San Pedro Community, including recreation, quality of life and jobs. In particular, coordinate with LAHD's Waterfront development planning to create more waterfront-oriented recreational amenities and improve the community's access to them.	**Inconsistent.** The No Build Alternative would not create more waterfront-oriented recreational amenities and improve the community's access to them. Therefore, the No Build Alternative would not better serve the interests of the San Pedro Community.	**Consistent.** The proposed project would include updated and new, controlled intersections, and bicycle and pedestrian facilities which would tie into LAHD's Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project.

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
LU13.4 Reduce impacts. Utilize Port of Los Angeles resources to reduce local impacts where appropriate.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and therefore would not utilize POLA resources to reduce local impacts where appropriate.	**Consistent.** The proposed project would result in the acquisition of POLA parcels by Caltrans in order to improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange. This would improve goods movement and traffic circulation in a manner that is sensitive to the needs of the local community.
M7.2 Priority motorized vehicle routes. Support the identification of motorized vehicle streets for arterials with the highest traffic volumes and demonstrated congestion to establish motorized vehicle circulation as paramount to alternative roadway user needs and to encourage investment in congestion relief programs and/or truck safety improvements for the identified routes.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and therefore would not result in congestion relief and/or truck safety for priority motorized vehicle routes.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities. This would relieve congestion relief and improve safety.
M9.1 Regional coordination. Coordinate with Councils of Government and regional transportation planning agencies (such as SCAG and Metro) and adjacent cities to improve shuttle services, encourage ridesharing, bicycle sharing, and other TDM programs within the region.	**Inconsistent.** The No Build Alternative would not result in regional coordination and therefore would not improve or encourage Transportation Demand Management programs.	**Consistent.** The proposed project is included in the SCAG 2016–2040 RTP/SCS and would improve goods movement and traffic circulation in the area. The Build Alternative would include updated and new, controlled intersections, and bicycle and pedestrian facilities that would tie into LAHD's Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project.
M10.2 Efficient truck movement. Provide appropriately designed and maintained roadways to safely accommodate truck travel.	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and therefore would not result in congestion relief and/or truck safety.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as include updated and new, controlled intersections, and bicycle and pedestrian facilities, that would improve goods movement and traffic circulation in the area in a safe manner.
LU18.2 Preserve access to coastal views. Ensure public visual access to coastal views by means of appropriately located scenic overlooks, turnouts, view spots and other areas for limited vehicular parking, especially along designated Scenic Highways and Bikeways.	**Consistent.** The No Build Alternative would maintain access to coastal views in its existing condition; however, it would not enhance access along scenic highways.	**Consistent.** The City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. The proposed project would include updated and new, controlled intersections, and bicycle and pedestrian facilities that would integrate with the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project. Therefore, the proposed project

Table 2.1.5: Consistency with Regional and Local Plans

Policy	No Build Alternative	Build Alternative (Preferred Alternative)
		would enhance the scenic highway and access to coastal views.
LU18.3 Protect public views from Scenic Highways. Preserve existing public scenic views of the ocean and harbor from designated Scenic Highways, and designated scenic view sites. Development adjacent to a Scenic Highway shall protect public views to the ocean to the maximum extent feasible, be adequately landscaped to soften the visual impact of the development, and, where appropriate, provide hiking or biking.	**Consistent.** The No Build Alternative would preserve existing public scenic views of the ocean and harbor from designated scenic highways.	**Consistent.** The City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. The proposed project would include updated and new, controlled intersections, and bicycle and pedestrian facilities that would integrate with the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project. Therefore, the proposed project would enhance the scenic highway and access to coastal views.
Port Master Plan (2014)		
Policy 2.1: Locate, design, and construct port-related projects to (1) minimize substantial adverse impacts, (2) minimize potential traffic conflicts between vessels, (3) prioritize the use of existing land space for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities, (4) provide for other beneficial uses including, but not limited to, recreation and wildlife habitat uses, to the extent feasible, and (5) encourage rail service to port areas and multicompany use of facilities. (California Coastal Act Section 30708)	**Inconsistent.** The No Build Alternative would not improve the safety and operational issues occurring at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and therefore would not result in improved access to POLA-related facilities.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, and would include realigned WB on- and off-ramps with updated and new, controlled intersections, which would improve access to and from POLA facilities.
Pacific Corridor Redevelopment Plan (2002)		
Objective 1: Community Image and Vision. To maintain the Downtown San Pedro and the surrounding area as an aesthetically pleasing community reflecting its past and reinforcing its status as an international port city, with waterfront access.	**Inconsistent.** The No Build Alternative would maintain the surrounding area in its existing condition; however, it would not improve goods movement and or enhance waterfront access, and therefore would not reinforce Los Angeles' status as an international port city.	**Consistent.** The proposed project would modify and improve existing interchange infrastructure to improve safety and access, as well as improve goods movement, reinforcing Los Angeles' status as an international port city. The proposed project would also include updated and new, controlled intersections, and bicycle and pedestrian facilities that would tie into LAHD's Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project.

[1] Bicycling facilities are ideally suited for a host of slow-moving modes, including but not limited to scooters, skateboards, rollerblading, rideables, and other future compact personal transportation technologies.

ADA = Americans with Disabilities Act
Caltrans= California Department of Transportation
City = City of Los Angeles
EB = eastbound
LAHD = City of Los Angeles Harbor Department
POLA = Port of Los Angeles
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
SCAG = Southern California Association of Governments
SR = State Route
WB = westbound

Pacific Corridor Redevelopment Plan

The Redevelopment Plan for the Pacific Corridor Redevelopment Project (City of Los Angeles 2002) provides a basic framework for the redevelopment, rehabilitation, and revitalization within the Pacific Corridor, which includes the southern portion of the proposed project along Harbor Boulevard. The relevant objective in the Redevelopment Plan and an analysis of its consistency with the proposed project are included in Table 2.1.5.

2.1.2.4 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

Consistency with State, regional, and local plans and programs is related to the consistency of permanent project changes with those plans. The construction of the Build Alternative would not result in any inconsistencies with State, regional, and local plans and policies as summarized in Table 2.1.5.

No Build Alternative

Consistency with State, regional, and local plans and programs is related to the consistency of permanent changes with those plans. Therefore, the No Build Alternative would not result in any inconsistencies with State, regional, and local plans and policies as there would be no temporary impacts.

Permanent Impacts

Build Alternative (Preferred Alternative)

The local land use policies consistency analysis for the project alternatives is provided in Table 2.1.5. The Build Alternative would be generally consistent with the applicable policies and objectives contained in the City's General Plan, the San Pedro Local Coastal Program (LCP) Specific Plan, LAHD's Port Master Plan, and the Pacific Corridor Redevelopment Plan. Specifically, the proposed project is consistent with the policies and objectives to improve regional transportation facilities, goods movement, safety for all users, and access to the waterfront. In addition, implementation of the Build Alternative would not result in changes to existing land use patterns in the project area because SR-47 is an existing transportation facility located in a highly developed area, and the Build Alternative would result in a limited number of acquisitions. The Build Alternative would not require an amendment to the City's General Plan, the San Pedro LCP Specific Plan, LAHD's Port Master Plan, or the Pacific Corridor Redevelopment Plan.

No Build Alternative

The existing condition of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange in the project area is generally not consistent with the regional mobility objectives of the City's General Plan. As shown in Table 2.1.5, the No Build Alternative would be generally inconsistent with the policies in the City's General Plan related to circulation and level of service because the implementation of the No Build Alternative would not facilitate transportation improvements along SR-47.

2.1.2.5 Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in substantial permanent effects related to plan consistency, land use compatibility, or community facilities and services. No additional measures or mitigation are required.

2.1.3 Coastal Zone

The proposed project is located within the coastal zone and has the potential to affect resources protected by the Coastal Zone Management Act of 1972 (CZMA), which is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management plans. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA. They include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own LCPs. The project is within the Coastal Zone and constitutes development, so a coastal development permit (CDP) will be required following the Project Approval/Environmental Documentation (PA/ED) phase of the project. The project bisects LAHD and California Coastal Commission jurisdictions. Most of the project is outside POLA and within the San Pedro district of Los Angeles,

which does not have a certified LCP. Therefore, the Chapter 3 policies of the Coastal Act are the standard of review for a CDP. The portion of the project within POLA is subject to review under the policies of the POLA Master Plan. Pursuant to Coastal Act Section 30715, the project is an appealable category of development: "roads or highways which are not principally for internal circulation within the port boundaries." Coastal Act Section 30601.3 authorizes the California Coastal Commission to process a consolidated CDP application when the applicant, the local government(s), and the California Coastal Commission all agree to do so. As an alternative to separate coastal permits subject to different standards of review in multiple jurisdictions, the consolidated coastal permit is subject to review and approval only by the California Coastal Commission, and the Coastal Act is the standard of review for the entire project, with any relevant certified Local Coastal Program, Land Use Plan or Port Master Plan providing guidance. Thus, LAHD, on behalf of Caltrans, will apply for a consolidated permit during final design. A Federal Consistency Certification would be needed as well. The Federal Consistency Certification process would be processed prior to or concurrently with a CDP application.

2.1.3.1 San Pedro Local Coastal Program Specific Plan

San Pedro has a Specific Plan and a Coastal Land Use Plan, which guide development in the coastal zone. Relevant land use-related policies in the San Pedro LCP Specific Plan are described below. Refer to Table 2.1.5 for an analysis of the consistency of the proposed project with the San Pedro LCP Specific Plan.

2.1.3.2 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

Consistency with the San Pedro LCP Specific Plan is related to the consistency of permanent project changes with the plan. The construction of the Build Alternative would not result in any inconsistencies with the San Pedro LCP Specific Plan as summarized in Table 2.1.5. Since the project will require work within the Coastal Zone, a CDP will be required and will be obtained during final design.

No Build Alternative

Consistency with the San Pedro LCP Specific Plan is related to the consistency of permanent changes with the plan. Therefore, the No Build Alternative would not result in any inconsistencies with the San Pedro LCP Specific Plan, as there would be no temporary impacts.

Permanent Impacts

Build Alternative (Preferred Alternative)

The San Pedro LCP Specific Plan policies consistency analysis for the project alternatives is provided in Table 2.1.5. The Build Alternative would be generally consistent with the applicable policies and objectives contained in the San Pedro LCP Specific Plan. Specifically, the proposed project is consistent with the policies and objectives to maintain visual resources, preserve access to coastal views, and protect public views from scenic highways. The proposed project would include updated and new controlled intersections, and bicycle and pedestrian facilities that would tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project. Therefore, project implementation would enhance the City's Mobility and Conservation Elements' designated scenic highway (Front Street/Harbor Boulevard) and access to coastal views. Additionally, since the project will require work within the Coastal Zone, a CDP will be required and will be obtained during final design. Coastal Development Permits ensure compliance with the policies of Chapter 3 of the Coastal Act, which strive to protect coastal zone resources.

No Build Alternative

While the No Build Alternative would maintain access to coastal views in its existing condition, it would not include updated and new, controlled intersections or bicycle and pedestrian facilities that would integrate with the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project, enhancing access to coastal views.

2.1.3.3 Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in substantial permanent effects related to plan consistency, land use compatibility, or community facilities and services. No additional measures or mitigation are required.

2.1.4 Parks and Recreational Facilities

The City operates and maintains hundreds of athletic fields, 422 playgrounds, 321 tennis courts, 184 recreation centers, 72 fitness areas, 62 swimming pools and aquatic centers, 30 senior centers, 26 skate parks, 13 golf courses, 12 museums, 9 dog parks, and 187 summer youth camps (City of Los Angeles 2018).

The following parks and recreational facilities in the City are within 0.5 mile of the project area and are shown on Figure 2.1-3:

- **Knoll Hill Little League:** This park consists of three Little League baseball fields.

- **Knoll Hill Dog Park:** This is a dog park less than an acre in size.
- **Leland Park:** This park features a children's play area, a multipurpose room, basketball courts (lighted/outdoor), volleyball courts (lighted/outdoor), a baseball diamond (lighted), outdoor fitness equipment, and a ping-pong table. This park is approximately 15.7 acres and is located approximately 1,900 feet from the proposed project.
- **Bandini Canyon Park:** This park is an approximately five-acre passive activity park located about 2,050 feet from the proposed project.
- **San Pedro Welcome Park:** This park is an approximately 0.39-acre passive activity park located about 1,940 feet from the proposed project.

These parks and recreational facilities were evaluated to assess whether they would trigger the requirements for protection under Section 4(f).

2.1.4.1 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

Construction of the Build Alternative would not result in temporary effects to park or recreational resources.

No Build Alternative

The No Build Alternative would not result in the construction of any improvements to the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange area other than routine maintenance. As a result, the No Build Alternative would not result in temporary adverse effects related to parks and recreation facilities, or Section 4(f) resources.

Permanent Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would result in the acquisition of Knoll Hill Dog Park; however, due to the absence of documentation identifying Knoll Hill Dog Park among the City's recreational resources and the property's lack of an official designation that its primary purpose is a park, recreation area, or refuge, leads to the determination that Knoll Hill Dog Park is not a park or recreation area of national, state, or local significance. Therefore, it is not a section 4(f) resource. Additional detail can be found in a letter from Caltrans sent to LAHD on June 12, 2018. A concurrence letter from LAHD was received on July 25, 2018. Therefore, the Build Alternative would not result in permanent impacts related to Section 4(f) resources.

No Build Alternative

The No Build Alternative would not result in any improvements to the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange within the study area. As a result, the No Build Alternative would not result in permanent impacts related to parks and recreation facilities, or Section 4(f) resources.

2.1.4.2 Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in substantial permanent effects related to plan consistency, land use compatibility, or community facilities and services. No additional measures or mitigation are required.

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2.2 Growth

2.2.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 Code of Federal Regulations [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. The CEQA Guidelines (Section 15126.2[d]) require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

2.2.2 Affected Environment

Existing and General Plan land uses in the City of Los Angeles (City) around the proposed project, as well as projected growth rates, are discussed in Section 2.1, Land Use, and in Chapter 1, Section 1.2.2.3, Social Demands and Economic Development.

This growth impact analysis follows the first-cut screening guidelines provided in the California Department of Transportation's (Caltrans) *Guidance for Preparers of Growth-Related, Indirect Impact Analyses* (May 2006), which provides a first-cut screening approach to growth impact analysis that identifies the need for and extent of growth-related impact analysis based on the responses to various questions related to a project's change in accessibility, its potential to influence growth, and the potential for project-related growth to impact resources of concern.

2.2.3 Environmental Consequences

2.2.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Any potential growth-related impacts of the Build Alternative would be permanent. Therefore, there would be no temporary growth-inducing impacts under the Build Alternative.

No Build Alternative

No improvements to the State Route (SR) 47 interchange within the project limits would be implemented under the No Build Alternative. Therefore, the No Build Alternative would not result in temporary growth-inducing impacts.

2.2.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

The assessment of the potential growth-related impacts of the Build Alternative was conducted using the first-cut screening analysis approach, including assessment of whether further analysis would be necessary based on consideration of the following four questions.

How, if at all, does the proposed project potentially change accessibility?

The Build Alternative proposes improvements to an existing freeway facility and would alter access to or from the facility. The proposed project is located in a highly urbanized area, and the proposed improvements do not provide a new transportation facility or new access points to previously inaccessible areas. The Build Alternative would improve safety and help alleviate existing and forecasted traffic congestion in the study area, resulting in improved operations on SR-47 and on nearby arterials. Additionally, the Build Alternative would help accommodate projected future (2045) traffic volumes in the study area consistent with adopted local land use and transportation plans (as discussed in Section 2.1, Land Use, and Chapter 1, Section 1.2.2.3, Social Demands and Economic Development). Therefore, the project does not have the potential to change accessibility.

How, if at all, do the project type, project location, and growth pressure potentially influence growth?

Growth in Los Angeles is expected to occur with or without the Build Alternative, and the Build Alternative would accommodate approved and planned growth in the study area (see Table 2.20.1 for a list of reasonably foreseeable projects within the study area) because it would improve the operational efficiency of a heavily traveled interchange of SR-47 and thereby help alleviate existing and forecasted congestion in the study area. Pressure for growth is a result of a combination of factors, including economic, market, and land use demands and conditions. The study area is within Los Angeles, which is projected to experience a population growth rate of 19.9 percent between 2012 and 2040, as described in the Southern California

Association of Governments' (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Final Growth Forecasts.[1]

The improvements made to enhance the safety and operational efficiency of the existing SR-47 facility could make growth in the study area more attractive. However, as shown in Table 2.20.1, a substantial number of development projects were proposed and approved prior to the initiation of the planning studies for the proposed project, which indicates that development around the study area is not dependent on the completion of this freeway improvement project. Additionally, the SR-47 interchange is located in a heavily urbanized and built-out area, wherein a substantial amount of land available for new development is not available. The project is in conformance with the growth-related objectives and policies of the City's General Plan. The overarching goals in the General Plan call for the provision of adequate transportation facilities and interagency coordination to achieve a reduction in regional traffic congestion. The Build Alternative does not propose a land use that is inconsistent with these goals or other related policies. Moreover, the fact that the project is called for in the Federal Transportation Improvement Program (FTIP), for which local jurisdictions provide input, suggests that growth policies would effectively manage any growth created by the Build Alternative. The project is unlikely to lead to the intensification of development densities or schedules for development, and no development is predicated on the project being built. Table 2.20.1 provides a status of development projects proximate to the study area. These developments would exist under their current schedules either with or without the proposed project.

The Build Alternative is unlikely to alter the historical and projected growth patterns within the affected jurisdictions and Los Angeles County, and do not encourage growth on undeveloped and unplanned land. The proposed transportation improvements of this project would accommodate existing traffic in the area. Therefore, the Build Alternative would accommodate existing and planned growth but would not influence growth beyond what is currently planned.

[1] Southern California Association of Governments (SCAG). Website: http://www.scag.ca.gov/Documents/2016 2040RTPSCS Final Growth ForecastbyJurisdiction.pdf (accessed May 9, 2017).

Is project-related growth reasonably foreseeable as defined in NEPA?

Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable, rather than remote and speculative. As discussed above, the Build Alternative would not influence growth beyond those projects currently planned for the area (Table 2.20.1) and would not influence the rate, type, or amount of growth that would otherwise occur. Therefore, no reasonably foreseeable project-related growth would occur under the Build Alternative.

If there is project-related growth, how, if at all, will that impact resources of concern?

As indicated above, because the Build Alternative would not influence the rate, type, or amount of growth that would otherwise occur, the reasonably foreseeable growth anticipated to occur in the Study Area is not project-related.

Because the Build Alternative would not result in project-related growth impacts, no analysis of those potential impacts beyond what is contained above in the first-cut screening analysis is necessary.

No Build Alternative

No improvements to SR-47 within the study area would occur under the No Build Alternative. Therefore, the No Build Alternative would not result in any permanent growth-related impacts.

2.2.4 Avoidance, Minimization, and/or Mitigation Measures

Because the Build Alternative would not result in any temporary or permanent growth-related impacts, no avoidance, minimization, or mitigation measures are required.

2.3 Community Impacts

2.3.1 Community Character and Cohesion

2.3.1.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.3.1.2 Affected Environment

The study area for community character and cohesion includes portions of the San Pedro community of the City of Los Angeles (City), specifically the three census tracts adjacent to the project area (Census Tracts 2965, 2962.10, and 2962.20), which are shown on Figure 2.3-1. The study area includes those census tracts in which the majority (greater than 50 percent) of the census tract is within 0.5 mile (mi) of the project location. Data presented in this section are based on census tract information available from the United States Census Bureau (Census Bureau), the 2010 Census, and the 2012–2016 American Community Survey (ACS).[1] It should be noted that 2012–2016 ACS data were not available for Table B16001, which provides data regarding the primary language spoken at home by residents aged five and over. Therefore, 2011–2015 ACS data are utilized for Table B16001, as they represent the

[1] The ACS is an ongoing survey conducted by the United States Census Bureau that provides data every year, supplying communities with current information they need to plan investments and services. ACS data are estimates derived from a sampling of the population, rather than population totals collected for the decennial census.

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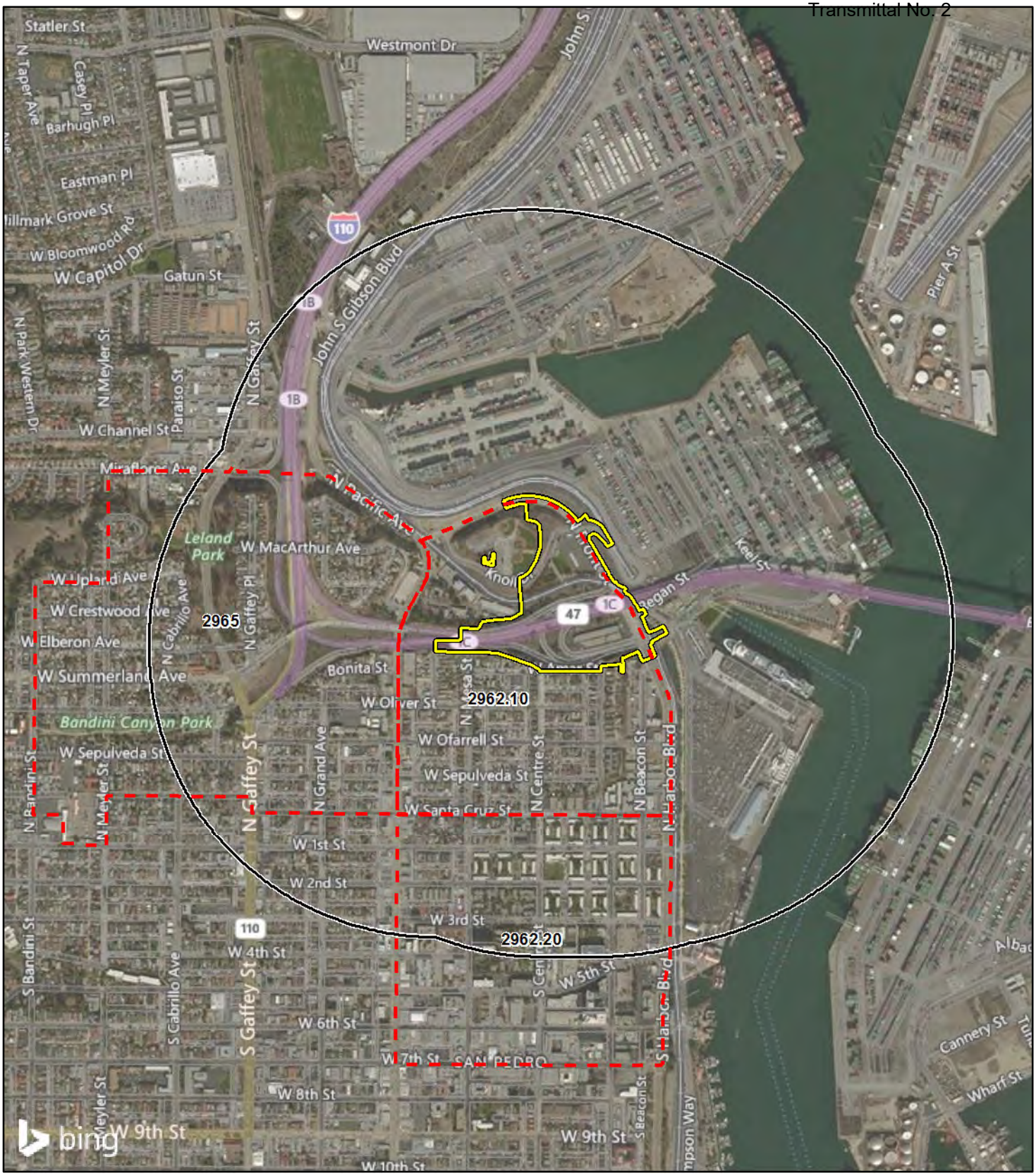


FIGURE 2.3-1

LEGEND

- Project Location
- Study Area
- Census Tracts

0 625 1250
FEET

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Census Tracts
07-LA-47 PM 0.3/0.8
EA No. 07-31850

SOURCE: Bing Maps (2015); AECOM (11/2017); US Census (2010)

I:\AEM1602\GIS\Ch1_CensusTracts.mxd (5/18/2018)

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best available information regarding the language spoken at home in Los Angeles County (County), the City, and the three census tracts in the study area.

Community character consists of all the attributes (including social and economic characteristics) and assets that make a community unique and that establish a sense of place for its residents. The southern portion of the study area, south of State Route (SR) 47, consists mainly of multifamily residential uses and the entrance to the Los Angeles Cruise Terminal. By contrast, the northern portion of the study area, north of SR-47, is characterized by community uses, including an existing dog park and baseball fields, a LAHD Port Police dog training area, a LAHD truck inspection facility, and the entrance to POLA facilities.

Community cohesion is the degree to which residents have a sense of belonging to their neighborhoods, a level of commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time. Demographic data compiled by the Census Bureau, including the 2010 Census and the 2012–2016 ACS, may be used to measure a community's level of cohesion. The following demographic indicators tend to correlate with a higher degree of community cohesion and are used to determine the degree of community cohesion in Los Angeles and the study area census tracts:

- **Ethnicity:** In general, homogeneity of the population contributes to higher levels of community cohesion. Communities that are ethnically homogeneous often speak the same language, hold similar beliefs, and share a common culture and, therefore, are more likely to engage in social interaction on a routine basis. The Census Bureau compiles limited data regarding ethnicity. While the Census Bureau provides data regarding Hispanic/Latino origin, the language spoken at home, and ancestry, it does not provide data regarding religion. Although the Census Bureau data provide an incomplete picture of ethnic identity, as described above, Table B16001 of the 2011–2015 ACS provides data regarding the primary language spoken at home by residents aged five and over. This data can be used to isolate discernable ethnically homogeneous communities[1] within the general

[1] An ethnically homogeneous community is a geographic area with a high population concentration of a particular ethnic group. Ethnically homogeneous communities often possess a strong cultural identity, are frequently home to places of worship and other cultural institutions that reflect local ethnic traditions, and feature a cluster of businesses that cater to the local ethnic group by providing familiar goods and services. Due to their shared cultural background, residents of ethnically homogeneous communities often demonstrate a strong sense of community cohesion.

population by identifying large groups of people who share a common language and, presumably, many shared cultural characteristics.

- **Housing Occupancy:** Communities with a high percentage of owner-occupied residences are typically more cohesive because their populations tend to be less mobile. Because they have a financial stake in their community, homeowners often take a greater interest in what is happening in their community than renters do. This means they often have a stronger sense of belonging to their community. Table B25003 of the 2012–2016 ACS provides data on the percentage of housing units in the County, as well as in the City and the study area census tracts, that are owner-occupied.
- **Household Size:** In general, communities with a high percentage of families with children are more cohesive than communities consisting largely of single people. This appears to be because children tend to establish friendships with other children in their community. The social networks of children often lead to the establishment of friendships and affiliations among parents in the community. Although the Census Bureau does not provide specific data regarding the number of children present in each household, Table B25010 of the 2012–2016 ACS provided data on the number of persons per household in the County, the City, and the study area census tracts, which can serve as a proxy for households with children.
- **Elderly Residents:** In general, communities with a high percentage of elderly residents (65 years or older) tend to demonstrate a greater social commitment to the community. This is because the elderly population, which includes retirees, often tends to be more active in the community, as they have more time available for volunteering and participating in social organizations. Table S0101 of the 2012–2016 ACS provides data on the age of the population of the County, as well as the populations of the City and the study area census tracts.
- **Transit-Dependent Population:** Communities with a high percentage of residents who are dependent on public transportation typically tend to be more cohesive than communities that are dependent on automobiles for transportation. This is because residents who tend to walk or use public transportation for travel tend to engage in social interactions with each other more frequently than residents who travel by automobile. Although the Census Bureau does not provide specific data regarding the percentage of the population that is dependent on public transportation for travel, the 2012–2016 ACS does provide a series of demographic data that can be used as a proxy for the transit-dependent population. For the purposes of this analysis, the transit-dependent population was

calculated by taking the number of residents aged 15 and over (the approximate population eligible to drive, as reported in Table B01001 of the 2012–2016 ACS), subtracting the number of persons living in group quarters (e.g., college residence halls, skilled nursing facilities, correctional facilities, and other group living environments where driving is not typically required, as reported in Table B26001 of the 2012–2016 ACS), subtracting the number of vehicles available (as reported in Table B25046 of the 2012–2016 ACS), and then dividing the difference by the population aged 15 and over.

- **Housing Tenure:** Communities with a high percentage of long-term residents are typically more cohesive because a greater proportion of the population has had time to establish social networks and develop an identity with the community. Table B25026 of the 2012–2016 ACS provides data regarding the year that each householder in Los Angeles County, the City of Los Angeles, and the study area census tracts moved into their current housing unit. For the purposes of this analysis, those households that moved into their current residence in 1999 or earlier are considered long-term residents since they have lived in their current residence for more than 15 years.

These indicators of community character and cohesion in the study area and the applicable local jurisdictions are described in greater detail below.

Ethnicity

Table 2.3.1 provides data regarding the language spoken at home in Los Angeles County, the City of Los Angeles, and the three census tracts in the study area, as reported in the 2011–2015 ACS. Table 2.3.1 also identifies whether ethnically homogeneous communities are likely to exist in the City and the study area census tracts. Ethnically homogeneous communities were identified in the study area city (the City of Los Angeles) when both of the following criteria were met: (1) 2,000 or more residents (or approximately 664 households[1]) speak a language other than English at home; and (2) the percentage of the population that speaks that language at home is higher than in Los Angeles County as a whole.

[1] Based on the average number of persons per household in Los Angeles County (3.01), as reported in the 2012–2016 ACS.

Table 2.3.1: Language Spoken at Home

Area	English[1]	Spanish[2]	French	Italian	Russian	Armenian	Persian	Chinese	Korean	Vietnamese	Tagalog	Other Languages	Ethnically Homogeneous Communities[3]
County													
Los Angeles County	43.2%	39.4%	0.4%	0.2%	0.5%	1.8%	0.8%	3.9%	2.0%	0.9%	2.5%	4.5%	N/A
Study Area City													
City of Los Angeles	40.0%	***42.8%***	***0.6%***	0.2%	***1.0%***	***1.9%***	***1.3%***	1.6%	***2.6%***	0.5%	2.5%	***4.9%***	6
Study Area Census Tracts													
Census Tract 2962.10	39.4%	***58.7%***	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.3%	1.1%	1
Census Tract 2962.20	42.2%	***51.0%***	***0.9%***	0.0%	***1.0%***	0.0%	0.2%	1.0%	***2.4%***	0.0%	0.0%	1.3%	1
Census Tract 2965	40.3%	***56.7%***	0.0%	***2.0%***	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1

Source: United States Census Bureau, American Community Survey 2011–2015 5-Year Estimates; Table B16001.

Note: ***Bold italicized numbers*** indicate the values are higher than those of Los Angeles County as a whole. Shaded numbers indicate the likely presence of an ethnically homogeneous community. An ethnically homogeneous community is likely to exist in a city when both of the following criteria are met: (1) 2,000 or more residents speak a language other than English at home; *and* (2) the percentage of the population that speaks that language at home is higher than in the county as a whole. Ethnically homogeneous communities are likely to exist in a census tract when all three of the following criteria are met: (1) 200 or more residents speak a language other than English at home; (2) at least 5 percent of the population in that census tract speaks that language at home; *and* (3) the percentage of the population that speaks a language other than English at home is higher than in the county as a whole).

1 English only.

2 Includes Spanish Creole.

3 An ethnically homogeneous community is a geographic area with a high population concentration of a particular ethnic group. Ethnically homogeneous communities often possess a strong cultural identity and typically include a concentration of businesses that cater to the local ethnic group by providing familiar goods and services.

These criteria were developed based on a reasonable estimate of the minimum number of residents required before ethnic places of worship, cultural institutions, and/or business districts were established in the community. Ethnically homogeneous communities were identified in a census tract when all three of the following criteria were met: (1) 200 or more residents (or approximately 66 households) speak a language other than English at home; (2) at least 5 percent of the population in that census tract speaks that language at home; and (3) the percentage of the population that speaks a language other than English at home is higher than in the County as a whole. Similar to the criteria developed for the study area city, these criteria were based on a reasonable estimate of the minimum number of residents required before ethnic places of worship, cultural institutions, and/or business districts are established in close proximity to the census tract.

Table 2.3.1 indicates that slightly more than a quarter of Los Angeles County residents speak Spanish at home. Los Angeles County also has large populations of residents who speak Armenian, Chinese, Korean, Vietnamese, or Tagalog at home. The City of Los Angeles has six ethnically homogeneous communities. All of the study area census tracts have one ethnically homogeneous community where more than 50 percent of residents speak Spanish at home.

Housing Occupancy

Table 2.3.2 provides a summary of the community cohesion indicators for the County, the City, and the study area census tracts based on 2012–2016 ACS data, including the percentage of owner-occupied residences. As shown in Table 2.3.2, the percentage of owner-occupied residences in the City (36.6 percent) is lower than in the County overall (45.7 percent). The study area census tracts also have a lower percentage of owner-occupied residences (between 10 percent and 29.2 percent) compared to the County.

Elderly Residents

Table 2.3.2 provides the percentage of the population that is elderly (65 years or older) in the County, the City, and the study area census tracts. As shown in Table 2.3.2, elderly residents comprise a slightly smaller share of the population in the City (11.5 percent) compared to the County overall (12.2 percent). The study area census tracts also have a lower percentage of elderly residents (between 9.10 and 11.6 percent) compared to the County.

Table 2.3.2: Community Cohesion Indicators

Area	Ethnically Homogeneous Communities[1]	Owner-Occupied Residences	Elderly Residents (>64 years old)	Average Household Size (persons)	Transit-Dependent Population[2]	Long-Term Residents (moved in 1999 or earlier)[3]
County						
Los Angeles County	N/A	45.7%	12.2%	3.01	26.8%	29.5%
Study Area City						
City of Los Angeles	6	36.6%	11.5%	2.83	***30.8%***	27.4%
Study Area Census Tracts						
Census Tract 2962.10	1	19.9%	11.2%	2.94	***41.0%***	26.2%
Census Tract 2962.20	1	10.0%	9.10%	2.60	***41.2%***	21.1%
Census Tract 2965	1	29.2%	11.6%	***3.10***	***32.4%***	***32.1%***

Source: United States Census Bureau, American Community Survey 2012–2016 5-Year Estimates; Tables B25003, B26001, B25046, B25026, and B25010, and S0101.

Note: ***Bold italicized numbers*** indicate the values are higher than those of Los Angeles County as a whole.

1 An ethnically homogeneous community is a geographic area with a high population concentration of a particular ethnic group. Ethnically homogeneous communities often possess a strong cultural identity and typically include a concentration of businesses that cater to the local ethnic group by providing familiar goods and services.

2 The transit-dependent population was calculated by taking the number of residents aged 15 and over (as reported in Table B01001 of the 2012–2016 ACS), subtracting the number of persons living in group quarters (as reported in Table B26001 of the 2012–2016 ACS), subtracting the number of vehicles available (as reported in Table B25046 of the 2012–2016 ACS), and then dividing the difference by the population aged 15 and over.

3 Includes those residents who moved into their current residence in 1999 or earlier, as reported in Table B25026 of the 2012–2016 ACS.

Household Size

Table 2.3.2 provides the average household size in the County, the City, and the study area census tracts. As shown in Table 2.3.2, the average household size in the City (2.83 persons) is less than in the County overall (3.01 persons). Two of the study area census tracts also have fewer persons per household (between 2.60 and 2.94 persons), while study area Census Tract 2965 (3.10 persons) has a larger average household size than the County overall.

Transit Dependency

Table 2.3.2 provides the percentage of the population that is transit-dependent in the County, the City, and the study area census tracts. As shown in Table 2.3.2, the transit-dependent population comprises a larger share of the general population in the City (30.8 percent) than in the County overall (26.8 percent). Table 2.3.2 also shows that the study area census tracts have a larger transit-dependent population (ranging from approximately 32.4 percent to 41.2 percent of the population) than the County overall.

Housing Tenure

Table 2.3.2 provides the percentage of residents that moved into their current residences in 1999 or earlier. As shown in Table 2.3.2, 29.95 percent of Los Angeles County's residents have lived in their current residences for more than 15 years and can therefore be considered long-term residents. Additionally, Table 2.3.2 shows that the City of Los Angeles and study area Census Tracts 2962.10 and 2962.20 do not have a larger percentage of long-term residents (27.4 percent, 26.2 percent, and 21.1 percent, respectively) when compared to the County. Study area Census Tract 2965 has a higher percentage of long-term residents (32.1 percent) than the County.

Community Cohesion Summary

As described above, the City of Los Angeles and all of the study area census tracts exhibit the same two community cohesion indicators, in that they have higher percentages of transit-dependent population than the County overall and they each have at least one ethnically homogeneous community. Study area Census Tract 2965 also has a higher percentage of long-term residents compared to the County. Based on these data, the City and the study area census tracts with two community cohesion indicators appear to exhibit a moderate degree of community cohesion. Census Tract 2965, which has one additional community cohesion indicator, appears to exhibit a high degree of community cohesion.

Other Demographics

Employment

Table 2.3.3 provides information regarding the civilian labor force in the City, including the number of employed and unemployed persons and the unemployment rate, with comparisons to County and State employment statistics. Table 2.3.3 also provides the number of primary jobs in the State, the County, and the City. Unlike the civilian labor force data, which is based on an area's resident labor force, primary jobs relate to the number of jobs physically located in an area. The Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Program defines a primary job as the job that earns an individual the most money.

Table 2.3.3: Study Area Employment

Area	Employment Status				
	Civilian Labor Force	Employed	Unemployed	Unemployment Rate	Primary Jobs[1]
California	19,344,400	18,568,900	775,500	4.0%	14,568,990
Los Angeles County	5,152,800	4,940,200	212,600	4.1%	3,928,040
City of Los Angeles	2,075,900	1,985,000	90,800	4.4%	1,549,208

Source 1: Employment Development Department, Labor Market Information Division, Monthly Labor Force Data for Cities and Census-Designated Places, November 2017 – Preliminary. Website: http://www.labormarketinfo.edd.ca.gov/file/lfmonth/allsubs.xls (accessed January 4, 2018).
Source 2: Employment Development Department, Labor Market Information Division, California Industry Employment & Labor Force, November 2017 – Preliminary. Website: http://www.labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf (accessed January 4, 2018).
Source 3: United States Census Bureau. 2015. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. Website: http://onthemap.ces.census.gov/ (accessed January 4, 2018).

Note: The Civilian Labor Force column reflects the civilian labor force, employed labor force, unemployed labor force, and unemployment rate (not seasonally adjusted) in November 2017, as reported by the California Employment Development Department. The Primary Jobs column reflects primary jobs in 2015, as reported by the United States Census Bureau. The California Employment Development Department does not compile labor force data at the census tract level.

[1] The United States Census Bureau's Longitudinal Employer-Household Dynamics Program defines a primary job as the job that earns an individual the most money.

As shown in Table 2.3.3, the City had a higher unemployment rate (4.4 percent) than the County in November 2017; however, the County had a higher unemployment rate (4.1 percent) than California overall (4.0 percent).

Table 2.3.3 also shows that as of 2015 (the latest available data), the City provided 1,549,208 primary jobs. This accounts for almost 40 percent of the County's primary jobs (3,928,040 primary jobs). The total number of primary jobs in the County accounts for greater than 25 percent of the total number of primary jobs in California (14,568,990 primary jobs). Therefore, the City functions as a regional employment center and the County serves as a statewide employment center.

Income and Poverty Status

Table 2.3.4 provides the median household income and the percentage of residents living below the poverty level for the County, the City, and the study area census tracts. As shown in Table 2.3.4, the median household income in the City ($51,538) is lower than in the County ($57,952). Table 2.3.4 also shows that the median household income for the study area census tracts is lower than the County, ranging from approximately $27,345 to $36,378. Table 2.3.4 also shows that the percentage of persons living below the poverty level is higher in the City (21.5 percent) than in the County (17.8 percent). The percentages of persons living below the poverty level in the study area census tracts are substantially higher than in the County, ranging from 27.4 percent to 41.7 percent.

Table 2.3.4: Household Income and Population Living Below the Poverty Level

Area	Median Household Income[1]	Population Living Below the Poverty Level[2]
County		
Los Angeles County	$57,952	17.8%
Study Area City		
City of Los Angeles	$51,538	21.5%
Study Area Census Tracts		
Census Tract 2962.10	$27,444	34.9%
Census Tract 2962.20	$27,345	41.7%
Census Tract 2965	$36,378	27.4%

Source: United States Census Bureau, American Community Survey 2012–2016 5-Year Estimates; Table B17001.

1 ***Bold italicized numbers*** indicate the values are higher than Los Angeles County as a whole.

2 ***Bold italicized numbers*** indicate the values are lower than Los Angeles County as a whole.

Community Facilities

Table 2.3.5 lists the community facilities (i.e., libraries, hospitals, public and private schools, and privately operated community centers and recreation facilities) within 0.5 mi of the project locations considered in the evaluation of potential effects to community facilities. These facilities are shown on Figure 2.1-3, Parks and Community Facilities, provided in Section 2.1, Land Use.

Table 2.3.5: Community Facilities

Community ID Number	Community Facility	Address	Type of Facility
1	Rancho San Pedro Recreation Center	275 West 1st Street, San Pedro, CA	Recreation Center
2	Los Angeles Unified School District—Harbor Service Center	740 North Pacific Avenue, San Pedro, CA	School
3	Barton Hill Elementary School	423 North Pacific Avenue, San Pedro, CA	School
4	(5) Harbor Division Police Station	2175 John S. Gibson Boulevard, San Pedro, CA	Police
5	Station No. 112—South Harbor Boulevard	444 South Harbor Boulevard, San Pedro, CA	Fire
6	Los Angeles Fire Department Station 36—North San Pedro	1005 North Gaffey Street, San Pedro, CA	Fire
7	Leland Park	863 South Herbert Avenue, San Pedro, CA	Park
8	Bandini Canyon Park	430 North Bandini Street, San Pedro, CA	Park
9	San Pedro Welcome Park	351 North Gaffey Street, San Pedro, CA	Park

2.3.1.3 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

Impacts to community cohesion generally depend on whether a project is likely to create a barrier within or disrupt connectivity of a community. Either of these can be a result of disruptions in access or residential and/or business acquisitions. Temporary impacts to community character and cohesion can occur from the temporary use of land from privately owned properties for use as temporary construction easements (TCEs), short-term air quality and noise effects, and temporary ramp closures/detours along and in the immediate vicinity of SR-47 within the project limits.

The Build Alternative would not require TCEs in areas immediately adjacent to commercial or residential areas. The construction of the realigned portion of Knoll Drive would ensure access to Knoll Hill is available throughout construction. Additionally, TCEs would be required north of and adjacent to Knoll Drive, as well as south of Knoll Drive, between the proposed realigned westbound on- and off-ramps, and north of the existing SR-47 westbound on-ramp. TCEs would also be required adjacent to and east of Front Street and Harbor Drive. However, none of these locations would impede access to residential areas.

Construction activities could result in temporary impacts associated with construction equipment noise and air emissions at residences and businesses adjacent to SR-47.

Ramp closures requiring alternative traffic routing could also result in increased short-term noise and air emission levels along the potential detour routes during construction. Implementation of Project Feature PF-N-1, provided in Section 2.14, would require the construction contractor to comply with California Department of Transportation (Caltrans) Standard Specifications regarding noise control during construction, as well as the City's Construction Noise Ordinance. Temporary air quality impacts would be minimized based on implementation of Project Features PF-AQ-1 through PF-AQ-5 and Measure AQ-6, provided in Section 2.13, Air Quality. These measures require the control of dust and equipment emissions during construction. These impacts would be temporary and would cease when project construction is complete.

The Build Alternative may require short-term overnight ramp closures or weekend closures during some phases of construction. However, many of the project improvements north of the SR-47 mainline may be constructed prior to any modification to the existing interchange, including the grading of Knoll Hill east of the Knoll Hill Little League fields and construction of the realigned portion of Knoll Hill Drive, which would ensure access to Knoll Hill is available throughout the remainder of construction. The majority of the westbound ramps, including the terminus intersection, may also be constructed outside the current freeway footprint. Access into the West Basin Container Terminal is likely required during construction, but coordination with LAHD staff may prioritize other container terminal gates to reduce traffic through the intersection during construction. Overnight closures may be required during reconstruction of the westbound gores. Detours would be rerouted to the North Gaffey Street or John S. Gibson Boulevard interchanges. Once the westbound ramps are functioning, the existing westbound ramp would be removed and the new alignment for the eastbound on-ramp would be constructed. Overnight closures for the eastbound on-ramp may be required for reconstruction of the gore area. Widening and reconstruction of the eastbound off-ramp are not anticipated to require temporary ramp closures exceeding 10 days in duration. Overall, the proposed improvements would require approximately two years to construct. A Transportation Management Plan (TMP) is included in Project Feature PF-T-1 and is described in Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities. The TMP would be prepared in coordination with the City, and access to all businesses and residential areas would be maintained during construction of the proposed project. The TMP would also address traffic delays; maintain traffic flow in the vicinity of the SR-47 interchange; manage detours and temporary ramp closures; provide ongoing

information to the public regarding construction activities, closures, and detours; and maintain a safe environment for construction workers and travelers.

Table 2.3.6 describes the temporary ramp closures that would be required for the Build Alternative, which are not anticipated to exceed 10 consecutive days. Based on the short-term and temporary nature of the closures, ramp closures are not anticipated to cause excessive inconvenience to the traveling public.

Table 2.3.6: Potential Ramp Closures

Ramp	Type of Closure
Westbound SR-47 on-ramp at Front Street	Short-Term (less than 10 consecutive days)
Westbound SR-47 off-ramp at Harbor Boulevard	
Eastbound SR-47 on-ramp at Harbor Boulevard	
Eastbound SR-47 off-ramp at Harbor Boulevard	

Source: *Draft Project Report* (December 2018).
SR = State Route

The TMP would also ensure that access to all nearby businesses would be maintained during ramp closures. All businesses would be accessible from alternate freeway off-ramps and by using local streets. Based on the availability of a well-developed arterial roadway network in the vicinity of the potential closures to accommodate detoured traffic, the increased travel times and distances would be limited, would result in minimal disruption to neighborhoods and businesses adjacent to the project area, and would not divide the study area city or neighborhoods. Nevertheless, construction-related closures could impede movement within the study area city, resulting in temporary adverse effects to community character and cohesion. Although community members would still be able to use community services and facilities during the construction period, there would be some degree of inconvenience due to construction-related delays, temporary closures, and construction equipment operation.

Construction employment has two components: direct and indirect. The direct effect is the number of construction jobs created to complete the proposed project. The indirect effect is the additional employment and business activity that would be generated in the regional economy by the initial construction expenditure.

Table 2.3.7 shows that construction of the Build Alternative is estimated to generate a total of 402 jobs. These construction jobs would generate temporary employment and revenues for both the local and regional economies.

Table 2.3.7: Estimated Construction Employment Under the Build Alternative (Preferred Alternative)

Estimated Project Costs		Estimated Employment Generated[1]			
		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs
Build Alternative	$30,900,000	129	129	144	402

Source: *Draft Project Report* (December 2018).

[1] Employment impacts vary over time. Based on the latest data provided by the Federal Highway Administration, $1 billion in investments supports approximately 13,000 construction jobs, with approximately 64 percent for direct and indirect jobs, and 36 percent for induced jobs. (Federal Highway Administration. "Employment Impacts of Highway Infrastructure Investment." Website: https://www.fhwa.dot.gov/policy/otps/pubs/impacts/ (accessed February 7, 2018).

[2] Assumes direct and indirect jobs are evenly split.

No Build Alternative

The proposed improvements would not be constructed under the No Build Alternative. Therefore, no temporary impacts related to community character and cohesion would occur.

Permanent Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would result in beneficial effects related to community character and cohesion in terms of improved access and connectivity, and decreased travel times. In addition, emergency services in the study area city (e.g., fire and police protection) would be more readily available with the Build Alternative because mobility in the study area would improve over existing conditions. The Build Alternative would provide improvements to a segment of SR-47 that has been in operation since its construction in the 1960s. Therefore, the Build Alternative would not create any new or exacerbate any existing physical divisions in the study area or in the San Pedro community of the City of Los Angeles.

As described in detail later in Section 2.6 Visual/Aesthetics, the Build Alternative would remove existing trees and other vegetation and introduce additional man-made components to the existing built environment. However, Project Features PF-VIS-1 through PF VIS-2, and Measure VIS-3 would be incorporated which would preserve existing landscape to the extent possible, replace landscape and irrigation in areas impacted by construction, and incorporate aesthetic treatments for new retaining walls and elevated features.

As described in detail later in Section 2.3.2, Relocation and Real Property Acquisition, the Build Alternative would result in limited property acquisition in the

project area. Project-related property acquisition would consist of an existing dog park and a police dog training facility, both on POLA property. No displacement impacts would occur.

Overall, it is unlikely that community character and cohesion would be permanently impacted. It is also important to note that SR-47 has been a prominent transportation corridor in the area since the 1960s, and most of the communities in the study area have been established adjacent to the existing SR-47 right-of-way (ROW). Changes associated with the proposed project would result in minimal alterations to community character and cohesion, and no adverse effects to communities would occur.

No Build Alternative

No improvements to SR-47 are proposed under the No Build Alternative. Therefore, no permanent impacts to community character and cohesion would occur.

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would result in beneficial effects related to community character and cohesion in terms of improved access and connectivity, and decreased travel times, no adverse impacts to community character and cohesion would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.3.2 Relocation and Real Property Acquisition

2.3.2.1 Regulatory Setting

California Department of Transportation's (Caltrans) Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix B for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix A for a copy of Caltrans' Title VI Policy Statement.

2.3.2.2 Affected Environment

As shown previously on Figure 2.3-1, the study area for the assessment of project effects related to property acquisition and relocation was defined as three census

tracts (Census Tracts 2962.10, 2962.20, and 2965) in the City of Los Angeles. This study area was selected because it covers the entire project area and includes areas in the vicinity of the project area where ROW acquisition is required for the Build Alternative. As described earlier in Section 2.1, Land Use, the existing land uses in the study area include primarily transportation, communications, and utilities (POLA uses), as well as open space recreation, vacant, and education uses immediately adjacent to the northern portion of the project area. Primary existing land uses in the southern portions of the project area include multi- and single-family residential, commercial, transportation, communications, and utilities.

2.3.2.3 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would require the use of TCEs on property on a temporary basis to allow access for the construction of retaining walls and ramp realignments. Some TCEs would also be required for use as construction staging and equipment laydown areas. The locations of the parcels that would be affected by these TCEs and parcels that would be affected by property acquisitions and permanent easements required for the Build Alternative are shown on Figure 2.3-2. Table 2.3.8 provides detailed information regarding the property acquisitions and easements required under the Build Alternative, including the parcel numbers, existing land uses on such parcels, and types of acquisitions or easements required. In addition, Table 2.3.8 indicates whether the property acquisitions or easements would result in relocations.

As shown in Table 2.3.8, the Build Alternative would require 17 TCEs in the project area. Most of these TCEs would consist of lands that are currently being used for landscaping or parking lots, or land that is currently vacant. As described in further detail under Permanent Impacts, below, several facilities would be reconfigured within the remaining LAHD property under the Build Alternative because portions of this land would be within the proposed on- and off-ramp facilities and ROW. Following the reconfiguration of these facilities, the properties on which they are located are proposed to be used for construction staging.

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LEGEND

Acquisitions

- Full
- Partial
- TCE

0 150 300
FEET

SOURCE: Bing Maps (2015); AECOM (12/2018); Los Angeles County (2017)

I:\AEM1602\GIS\Acquisitions.mxd (2/15/2019)

FIGURE 2.3-2

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Acquisitions

07-LA-47 PM 0.3/0.8

EA No. 07-31850

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Table 2.3.8: Build Alternative (Preferred Alternative) Proposed Right-of-Way Acquisition and Easements

APN	Existing Land Use	Acquisition (Partial or Full) and Easement Type	Relocation
7448-034-906	Transportation, Communications, and Utilities/Vacant	Partial	No
7448-034-927	Vacant	Partial	No
7448-035-906	Open Space and Recreation/Transportation, Communications, and Utilities	Partial	No
7448-035-907	Transportation, Communications, and Utilities	Partial	No
7448-035-913	Open Space and Recreation	Full	No
7448-035-914	Open Space and Recreation	Full	No
7448-035-925	Open Space and Recreation/Transportation, Communications, and Utilities	Full	Yes
7448-035-926	Open Space and Recreation/Transportation, Communications, and Utilities	Full	Yes
7448-035-927	Open Space and Recreation/Transportation, Communications, and Utilities	Partial	No
7448-035-935	Open Space and Recreation	Full	No
7448-035-936	Transportation, Communications, and Utilities	Full	No
7448-034-902	Vacant	TCE	No
7448-034-905	Vacant	Partial	No
7448-034-908	Vacant	TCE	No
7448-034-909	Vacant	TCE	No
7448-034-916	Vacant	Partial	No
7448-034-917	Vacant	TCE	No
7448-034-918	Vacant	TCE	No
7448-034-919	Vacant	TCE	No
7448-034-920	Vacant	Partial	No
7448-034-921	Vacant	Partial	No
7448-034-925	Vacant	TCE	No
7448-035-905	Transportation, Communications, and Utilities	Partial	No
7448-035-928	Transportation, Communications, and Utilities	Partial	No
7448-034-913	Vacant	TCE	No
7448-034-923	Vacant	Partial	No
7448-034-926	Vacant	Partial	No
7448-035-900	Vacant	TCE	No
7448-035-901	Vacant	TCE	No
7448-035-908	Vacant	TCE	No
7448-035-915	Transportation, Communications, and Utilities/Vacant	TCE	No
7448-035-921	Vacant	TCE	No

Table 2.3.8: Build Alternative (Preferred Alternative) Proposed Right-of-Way Acquisition and Easements

APN	Existing Land Use	Acquisition (Partial or Full) and Easement Type	Relocation
7448-035-923	Transportation, Communications, and Utilities/Vacant	TCE	No
7448-035-924	Transportation, Communications, and Utilities/Vacant	TCE	No
7448-035-930	Vacant	TCE	No
7440-024-911	Transportation, Communications, and Utilities	Partial	No
7440-025-904	Transportation, Communications, and Utilities	Partial	No
7440-025-905	Transportation, Communications, and Utilities	Partial	No
LR01	Transportation, Communications, and Utilities	Partial	No
LR02	Transportation, Communications, and Utilities	Partial	No
LR03	Transportation, Communications, and Utilities/Vacant	TCE	No

Source: *Draft Project Report* (December 2018).
APN = Assessor's Parcel Number
TCE = temporary construction easement

With incorporation of Project Feature PF-C-1, the temporary use of land during construction of the Build Alternative would not result in adverse effects.

PF-C-1 **Restoration of TCEs.** After construction, the TCEs used for the Build Alternative would be restored to their original pre-project conditions to the extent feasible. Because construction would disturb vegetation, new and disturbed slopes would be landscaped and irrigated to match existing conditions and to the extent necessary to ensure adequate erosion control. Owners of the parcels affected by TCEs would be compensated for temporary use of their property during construction.

No Build Alternative

The No Build Alternative would not construct any improvements to the SR-47/ Vincent Thomas Bridge and Harbor Boulevard/Front Street interchange. Therefore, the No Build Alternative would not require the temporary use of any privately owned land for TCEs or staging areas.

Permanent Impacts

Build Alternative (Preferred Alternative)

As shown in Table 2.3.8, the Build Alternative would require 18 partial acquisitions and 6 full acquisitions. The acquisitions would result in the permanent closure of an existing dog park and relocation of a police dog training facility on POLA property, as portions of this land are within the proposed on- and off-ramp facilities. The police dog training facility would be relocated outside the project area within POLA property. Although the dog park would be displaced, this is POLA property and is not considered a permanent recreational resource. Therefore, impacts related to displacements impacts would not be substantial. Additionally, the Build Alternative would also not result in property or sales tax revenue losses.

No Build Alternative

No improvements to the SR-47/Vincent Thomas Bridge and Harbor Boulevard/Front Street interchange are proposed under the No Build Alternative. Therefore, no displacements or property acquisitions would be necessary, and the No Build Alternative would not result in property or sales tax revenue losses.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project feature outlined above in Section 2.3.2.3, no adverse impacts related to TCEs would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.3.3 Environmental Justice

2.3.3.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2017, this was $24,600 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix A of this document.

2.3.3.2 Affected Environment

The environmental justice study area includes portions of the City of Los Angeles, including the three study area census tracts shown previously on Figure 2.3-1 (Census Tracts 2962.10, 2962.20, and 2965).

The Council on Environmental Quality (CEQ), an advisory body that has oversight of the federal government's compliance with EO 12898 and NEPA, has developed guidance for implementing environmental justice under NEPA.[1] The CEQ guidance recommends identifying minority populations where either (1) the minority population of the affected area exceeds 50 percent, or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. The CEQ guidance also recommends identifying low-income populations in an affected area by applying the annual statistical poverty thresholds from the Census Bureau Current Population Reports, Series P-60 on Income and Poverty.

[1] Council on Environmental Quality. 1997. *Environmental Justice under the National Environmental Policy Act*. December 10. Website: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf (accessed January 3, 2018).

In January 2003, Caltrans published the *Desk Guide, Environmental Justice in Transportation Planning and Investments* (Desk Guide), which provides information and examples of ways to promote environmental justice to those involved in making decisions about California's transportation system.[1] The Desk Guide notes that transportation agencies, particularly those in a state as diverse as California, may need to adapt the regulatory definitions of low-income and minority populations to conduct a meaningful analysis. In regions with large minority and low-income populations, for instance, use of the standard definitions to define such populations could result in selection of most of the region. Because the County contains substantial minority and low-income populations (73.1 percent minorities and 18.8 percent living below the poverty threshold established by the Census Bureau), a different standard is required to identify those census tracts in the study area where minority and low-income populations are present in meaningfully greater percentages than the general population in the County.

The Desk Guide also notes that the low-income or minority threshold may be adapted to make use of available data. For example, the Census Bureau determines the number of persons living below poverty based on its poverty thresholds, which differ slightly from the poverty guidelines defined by the Department of Health and Human Services (DHHS). For 2017, the Census Bureau's preliminary weighted average poverty threshold for a family of four was $25,086.[2] For 2017, DHHS established a poverty guideline of $24,600 for a family of four.[3] Therefore, because the available census data related to persons living below the poverty level is based on the Census

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1 California Department of Transportation. 2003. *Desk Guide, Environmental Justice in Transportation Planning and Investments*. January. Website: http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/EnvironmentalJustice DeskGuide Jan2003.pdf (accessed January 3, 2018).

2 United States Census Bureau. 2018. Preliminary Estimate of Weighted Average Poverty Thresholds for 2017. January 18. Website: https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html (accessed May 8, 2018).

3 United States Department of Health and Human Services. 2017 Poverty Guidelines for the 48 Contiguous States and the District of Columbia. Website: https://aspe.hhs.gov/2017-poverty-guidelines#threshholds (accessed May 8, 2018).

Bureau's poverty thresholds, as recommended in the CEQ guidance, this analysis identifies low-income populations that are meaningfully greater than the general population by applying the Census Bureau's poverty thresholds rather than the DHHS poverty guidelines.

This environmental justice analysis applies the following methodology to identify minority and low-income populations:

- Census tracts are considered to have substantial minority populations if their percentage of minority residents is more than 10 percentage points higher than the County as a whole (i.e., 83.1 percent or higher).
- Census tracts are considered to have substantial low-income populations if their percentage of residents living below the Census Bureau's defined poverty threshold is more than 5 percentage points higher than the County as a whole (i.e., 22.8 percent or higher).

The environmental justice analysis was conducted using demographic information from the 2011–2015 ACS and the 2012–2016 ACS. The following populations were considered in assessing whether the Build Alternative would result in disproportionate impacts to environmental justice populations or result in benefits for those populations:

- **Minority Population:** Defined as individuals who identify themselves as Black/African-American, Asian, Native Hawaiian/Pacific Islander, Native American/Native Alaskan, Some Other Race, two or more races, or of Hispanic/ Latino origin (a descriptor of ethnic origin; individuals may be of any race). As described in the methodology set forth above, study area census tracts are considered to have substantial minority populations if their aggregated percentage of minority residents is 83.1 percent or higher.
- **Low-Income Population:** Pursuant to the methodology outlined above, low-income populations are those persons living below the poverty level, as defined by the Census Bureau's poverty threshold. As described above, the Census Bureau's preliminary weighted average poverty threshold for a family of four was $24,563 for 2016. As described in the methodology set forth above, study area census tracts are considered to have substantial low-income populations if their percentage of persons living below the poverty level is 22.8 percent or higher.

The percentages of the population in Los Angeles County, the City of Los Angeles, and the study area census tracts that consist of minorities and low-income residents

are summarized in Table 2.3.9. The ***bold italicized*** percentages in Table 2.3.9 represent the City and the study area census tracts that contain substantial minority and low-income populations, as defined above, in comparison to the County overall.

Table 2.3.9: Minority and Low-Income Populations

Area	Minorities[1]	Low-Income Population[2]
County		
Los Angeles County	73.1%	17.8%
Study Area City		
City of Los Angeles	71.4%	21.5%
Study Area Census Tracts		
Census Tract 2962.10	***92.2%***	***34.9%***
Census Tract 2962.20	***88.7%***	***41.7%***
Census Tract 2965	***90.8%***	***27.4%***

Source: United States Census Bureau, 2012–2016 American Community Survey, Tables B03002 and B17001.

Note: ***Bold italicized numbers*** indicate the values that are substantially higher than the percentage for the County as a whole. For minority populations, "substantially greater" means 10 percentage points higher than the percentage for the County (i.e., 83.1%). For low-income populations, "substantially greater" means 5 percentage points higher than the percentage for the County (i.e., 22.8%).

1 Includes all individuals who identify themselves as Black/African-American, Asian, Native Hawaiian/Pacific Islander, Native American/Native Alaskan, Some Other Race, two or more races, or of Hispanic/Latino origin (persons of Hispanic/Latino origin may be of any race).

2 Persons living below the poverty level as defined as the Census Bureau's poverty thresholds. For 2017, the Census Bureau's preliminary weighted average poverty threshold for a family of four was $25,086 ($486 more than the Department of Health and Human Services poverty guidelines threshold [$24,600]).

As shown in Table 2.3.9, minorities comprise 73.1 percent of the population in the County. Minorities comprise a lower percentage of the population in the City (71.4 percent). Overall, substantial minority populations exist in the three study area census tracts, ranging from 88.7 percent to 92.2 percent.

As shown in Table 2.3.9, low-income residents comprise 17.8 percent of the population in Los Angeles County. Low-income residents comprise a higher percentage of the population in the City of Los Angeles (21.5 percent). Substantial low-income populations exist in the three study area census tracts, ranging from 27.4 percent to 41.7 percent.

In summary, all of the study area census tracts have substantial minority and low-income populations.

2.3.3.3 Environmental Consequences

Temporary Impacts

Build Alternative (Preferred Alternative)

As discussed in Section 2.3.1, Community Character and Cohesion, construction activities associated with the Build Alternative would temporarily affect residents and businesses throughout the entire project area, including low-income and minority populations. Those impacts would include temporary disruptions of local traffic patterns during short-term ramp closures as well as increased traffic congestion, noise levels, and dust. Project Features PF-AQ-1 through PF-AQ-5 and implementation of Measure AQ-6, detailed in Section 2.13, Air Quality, would minimize the proposed project's temporary air quality impacts. Implementation of Project Feature PF-T-1, described in Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities, would minimize the proposed project's temporary impacts related to access disruptions. Implementation of Project Feature PF-N-1, detailed in Section 2.14, Noise, would minimize the proposed project's construction noise impacts. With implementation of these project features and this minimization measure, low-income and minority populations would not be disproportionately impacted.

As described in Section 2.3.1, Community Character and Cohesion, the proposed project construction activities would provide direct and indirect jobs that would benefit local economies, including low-income and minority populations.

As described in further detail in Section 2.12, Hazardous Waste/Materials, one "medium risk" parcel that would be partially acquired under the Build Alternative was identified as having hazardous waste concerns. As shown in Table 2.3.10, below, these parcels are located in census tracts where low-income and minority populations are known to be present.

Table 2.3.10: Properties Proposed for Partial Acquisitions with Hazardous Waste Concerns

APN	Census Tract Location	Low-Income or Minority Population Present?
7448-035-927	2962.10	Yes

Sources: *Initial Site Assessment* (February 2017).
APN = Assessor's Parcel Number

No Build Alternative

Under the No Build Alternative, the temporary construction-related adverse effects on all populations (including low-income and minority populations) during construction of the Build Alternative would not occur. However, the low-income and minority populations also would not gain any of the economic benefits from the construction of the Build Alternative.

Permanent Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would not result in the displacement of residents. Therefore, the Build Alternative would not result in adverse effects on minority and low-income populations related to the acquisition of residential uses and/or the displacement of residents.

Although the Build Alternative would result in permanent traffic noise level increases along SR-47 within the project area, the proposed project would not result in any substantial increases in permanent noise levels in the study area. Therefore, low-income and minority populations would not be adversely affected.

The Build Alternative would benefit all study area residents, including low-income and minority populations, by improving mobility and circulation within the study area.

No Build Alternative

No improvements to SR-47 other than routine maintenance are proposed under the No Build Alternative. Therefore, the No Build Alternative would not result in property acquisition or permanent increases in traffic noise levels that would impact populations in the area, including low-income and minority populations. However, the No Build Alternative would also not provide the mobility and circulation benefits to populations in the area (including low-income and minority populations) that would occur under the Build Alternative.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Project features included in the Build Alternative would reduce temporary construction traffic, noise, and air quality impacts on all populations in the study area, including low-income and minority populations.

Temporary construction impacts on minority and low-income populations would be minimized by implementation of Project Feature PF-T-1, which is provided in Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities.

Temporary air quality effects would be minimized by Project Features PF-AQ-1 through PF-AQ-5, and remaining impacts would be minimized by implementation of Measure AQ-6, detailed in Section 2.13, Air Quality. These project features and this measure require the control of dust and equipment emissions during construction of the Build Alternative. These features and this measure would benefit all persons in the project area, including low-income and minority populations.

Temporary noise effects would be minimized by Project Feature PF-N-1, which is detailed in Section 2.14, Noise. Project Feature PF-N-1 includes compliance with the Caltrans Standard Specifications, Section 14-8.02, "Noise Control," and the City's Noise Ordinance during construction, respectively. This project feature would benefit all persons in the project area, including low-income and minority populations.

The Build Alternative would not result in permanent adverse effects on minority or low-income populations; therefore, no avoidance, minimization, and/or mitigation measures are required.

Based on the above discussion and analysis, the Build Alternative would not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice. No further environmental justice analysis is required.

2.4 Utilities/Emergency Services

This section is based on information from the *Draft Project Report* (December 2018).

2.4.1 Affected Environment

This section describes the existing utilities and emergency services facilities and providers in the project footprint (the maximum disturbance limits for the Build Alternative) and study area extending 0.5 mile (mi) from the limits of the project footprint.

2.4.1.1 Utilities

Existing utilities are located within and adjacent to the study area. The locations of utilities have been identified from utility and freeway as-built drawings and field reviews. Utility owners with existing facilities known to exist within the study area include the following:

- City of Los Angeles (City)
- Los Angeles Department of Transportation
- Los Angeles Department of Water and Power
- City of Los Angeles Harbor Department
- Southern California Gas
- Standard Oil
- United States Navy

2.4.1.2 Fire Protection

Fire protection and emergency medical/paramedic services in the study area city (Los Angeles) are provided by the Los Angeles Fire Department (LAFD). There are two LAFD fire stations within 0.5 mi of the study area: Station No. 112 (444 South Harbor Boulevard, San Pedro, CA) and Station No. 36 (1005 North Gaffey Street, San Pedro, CA).

2.4.1.3 Police Protection

Police protection services in the study area are provided by the Los Angeles Police Department (LAPD). There is one police station within 0.5 mi of the study area: LAPD Harbor Community Police Station (2175 John S. Gibson Boulevard, San Pedro, CA). The Los Angeles Port Police Headquarters are also approximately 0.5 mile south of the study area.

Police services on freeways in California, including State Route (SR) 47, are provided by the California Highway Patrol (CHP). The nearest CHP office is in Torrance, approximately 6.75 mi north of the study area.

2.4.2 Environmental Consequences

2.4.2.1 Temporary Impacts

Build Alternative (Preferred Alternative)

The construction of the Build Alternative could affect existing underground and overhead utility facilities, which could require protection in-place, removal, or relocation. The utility facilities that could potentially be affected during construction of the Build Alternative are listed in Table 1.6 in Chapter 1. An updated utility search would be conducted during final design to determine all utilities that would require protection in-place, removal, or relocation. Completion of the utility work may result in temporary service disruptions to some utility users in the study area.

The following project feature has been incorporated in the Build Alternative to minimize the potential temporary adverse effects of project construction on utilities.

PF-UES-1 During final design, utility relocation plans will be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in-place. If relocation is necessary, the final design will focus on relocating utilities within existing public rights-of-way (ROWs) and/or easements. If relocation outside of existing ROWs or additional public ROWs and/or easements are necessary, the final design will focus on relocating those facilities to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. Utility relocations are anticipated to be completed by the various utility owners prior to or during construction.

Prior to utility relocation activities, the contractor will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance about the date and timing of potential service disruptions.

During construction of the Build Alternative, some impairment to the delivery of emergency services, including fire and police response times, may occur due to the SR-47 ramp closures within the project limits. Detour routes would be provided to direct traffic around any ramp closures using the local arterial street network. Currently, it is expected that detoured traffic would be rerouted to the North Gaffey Street or John S. Gibson Boulevard interchanges. Detour plans would be developed during final design to finalize detour routes. Emergency services providers (including

the local fire and police departments and CHP) could experience travel delays when traveling to/from emergency scenes during these closures.

The following project feature has been incorporated into the Build Alternative to minimize the potential temporary adverse effects of project construction on emergency services:

PF-UES-2 Prior to and during construction, the contractor will coordinate all temporary ramp and arterial roadway closures and detour plans with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times. This will include the identification of alternative routes for emergency vehicles and development of routes across the construction areas in coordination with the affected agencies.

In addition, temporary construction impacts to emergency services would be minimized by project feature PF-T-1 in Section 2.5, Traffic and Transportation/ Pedestrian and Bicycle Facilities. Project feature PF-T-1 requires development and implementation of a Transportation Management Plan (TMP) during construction of the Build Alternative to address traffic delays; maintain traffic flow within and around the SR-47 interchange; manage detours and temporary ramp closures; provide ongoing information to the public regarding construction activities, closures, and detours; and maintain a safe environment for construction workers and travelers.

No Build Alternative

No improvements to SR-47 other than routine maintenance are proposed under the No Build Alternative. The freeway would remain as is, with the exception of other proposed projects that are under development or currently under construction. Therefore, the No Build Alternative would not result in temporary adverse effects on utilities and emergency services.

2.4.2.2 Permanent Impacts

Build Alternative (Preferred Alternative)

Any relocations or other effects to utility facilities under the Build Alternative would occur during the final design or construction phase. All existing utility facilities are anticipated to be maintained under the Build Alternative. The Build Alternative would not result in an increased demand for domestic water services, wastewater facilities, or solid waste disposal. Therefore, the Build Alternative would not result in permanent adverse effects on utility providers or their facilities.

As required by the California Department of Transportation (Caltrans) and the respective standards of the affected city, emergency access would be maintained or provided as part of the final design of the Build Alternative. The improvements to the SR-47/Vincent Thomas Bridge and Harbor Boulevard/Front Street intersection under the Build Alternative would reduce traffic congestion and result in decreased travel times on SR-47 compared to the No Build Alternative. These improvements in traffic flow are likely to improve emergency response times within the study area. Therefore, the Build Alternative would not result in adverse effects on emergency services and providers.

No Build Alternative

No improvements to SR-47 are proposed under the No Build Alternative other than routine maintenance. The freeway would remain as is, with the exception of other proposed projects that are under development or currently under construction. Therefore, the No Build Alternative would not result in permanent adverse effects related to utilities and emergency services providers and their facilities.

2.4.3 Avoidance, Minimization, and/or Mitigation Measures

Because the project would incorporate project features as outlined above in Section 2.4.2.1, no adverse impacts to utilities and emergency services would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.5.1 Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

2.5.2 Affected Environment

This section is based on the *Final Traffic Study Report* (March 2018) prepared for the proposed project. The project limits on State Route (SR) 47 extend from approximately Post Mile [PM] 0.3 to PM 0.8.

The proposed study area for the traffic analysis includes the following intersections within the project limits:

- Front Street and Knoll Drive/West Basin Container Terminal (WBCT) Gate 2
- Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street

The study area also includes the following freeway and ramp segments:

- Interstate (I) 110 southbound (SB) to SR-47 eastbound (EB)
- I-110 northbound (NB) (Gaffey Street) to SR-47 EB
- SR-47 EB west of Harbor Boulevard

- SR-47 EB off-ramp to Harbor Boulevard
- SR-47 EB between Harbor Boulevard ramps
- SR-47 EB on-ramp from Harbor Boulevard
- SR-47 EB east of Harbor Boulevard
- SR-47 westbound (WB) east of Harbor Boulevard
- SR-47 WB off-ramp to Harbor Boulevard
- SR-47 WB between Harbor Boulevard ramps
- SR-47 WB on-ramp from Harbor Boulevard
- SR-47 WB west of Harbor Boulevard
- SR-47 WB to I-110 SB (Gaffey Street)
- SR-47 WB to I-110 NB

The *Traffic Study Report* (January 2018) considered the following scenarios:

- Existing Baseline (2015)
- No Build Alternative—Opening Year (2023)
- Build Alternative—Opening Year (2023)
- No Build Alternative—Design Year (2045)
- Build Alternative—Design Year (2045)

2.5.2.1 Existing Facility

As previously stated in Chapter 1, SR-47 is a State highway that begins at the south end of the Harbor Freeway (I-110) in the City of Los Angeles (City) and travels east on the Vincent Thomas Bridge to Terminal Island. SR-47 then heads north to include a portion of Henry Ford Avenue and Alameda Street, eventually ending at SR-91 in the City of Compton. SR-47 serves as a linkage connecting Terminal Island to the mainland in Los Angeles County. The section of SR-47 within the project study area (refer to Figure 1-1) is a four-lane expressway incorporating the Vincent Thomas Bridge's connection to I-110 in the community of San Pedro to Terminal Island. Congestion exists within the project area during peak commute times and is expected to worsen in the future.

2.5.2.2 Existing Traffic Operations

Existing Levels of Service

As discussed in Section 1.2.2.1, Capacity, Transportation Demand, and Safety, and as shown in Tables 1.2 and 1.3 in Chapter 1, the SR-47 corridor in the study area currently operates at level of service (LOS) D or better at the intersections and on the

freeway segments. Existing traffic conditions described in this section and in Section 1.2.2.1 are based on traffic counts and baseline conditions in 2015.

Mainline and Ramps

An LOS analysis was conducted for the Existing Baseline condition on project mainline segments, weaving segments, and ramp merge and diverge areas within the study area limits. Table 1.1, provided earlier in Chapter 1, provides information on the Existing Baseline traffic volumes during the a.m. and p.m. peak hours on SR-47 and the percentage of trucks. Of the eight freeway segments analyzed, one (SR-47 WB off-ramp to Harbor Boulevard) operates at LOS D during both peak-hour periods, and the rest operate at LOS B or C, as shown in Table 1.2.

Intersections

Two study area intersections were evaluated in terms of LOS using the Highway Capacity Manual (HCM) 2010 operations methodology. As shown in Table 1.3, both intersections currently operate at an acceptable LOS. The intersection of Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street operates at LOS C during both peak hours, while the intersection of Front Street and Knoll Drive/WBCT Gate 2 operates at LOS A in the a.m. peak hour and LOS B in the p.m. peak hour.

Ramp Capacity

On-ramp and off-ramp queuing for the Existing Baseline condition was evaluated. It was determined that existing storage lengths provided on all study area on- and off-ramps are adequate for the Existing Baseline condition during both the a.m. and p.m. peak hours.

2.5.2.3 Pedestrian and Bicycle Facilities

Pedestrian travel within the project limits is provided along Front Street and Harbor Boulevard via sidewalks and bicycle facilities. Front Street and Harbor Boulevard generally include sidewalks on at least one side of the road between Swinford Street and Knoll Drive. Additionally, Front Street and Harbor Boulevard within the project limits are marked/striped with on-road (Class II) bicycle lanes on both shoulders.

2.5.3 Environmental Consequences

The methodologies for forecasting and assessing future year with and without project traffic effects are described in detail in Chapters 5 and 6 of the *Traffic Study Report* (January 2018). The findings of those analyses are summarized below.

The analysis evaluation criteria used to determine acceptable traffic operation conditions are based on the LOS policies identified by the California Department of Transportation (Caltrans). Caltrans strives for freeway facilities to operate at either LOS C or D. Freeway LOS were shown on Figure 1-2 in Chapter 1. Based on Caltrans policy, LOS D was used as the threshold for the freeway facilities analysis. Any future freeway facilities projected to operate at an unacceptable LOS (LOS E or F) need to be mitigated. Per Caltrans, an impact to freeway facilities would occur if the project would:

- Degrade the LOS on the freeway facility from LOS D to LOS E or F; or
- Impact (worsen) a facility that is already operating at an unacceptable LOS (E or F)

The study area intersections, arterial roadways, and freeway segments fall within two jurisdictions: Caltrans and City of Los Angeles. Within the City, transportation impacts at signalized intersections are defined in accordance with the criteria in Table 2.5.1 (all tables are provided at the end of this section).

Traffic volume forecasts for Opening Year (2023) and Design Year (2045) No Build and Build conditions were developed by Cambridge Systematics using the Port Area Travel Demand Model (PortTAM). PortTAM is a detailed focus model of the Southern California Association of Governments' Regional Transportation Plan model. It includes the detailed container terminal truck and automobile trips and truck/automobile trips for all other cargo terminals and facilities within the Ports of Los Angeles and Long Beach (POLA/POLB) boundaries. The model has a base year of 2014 and a forecast year of 2045.

The improvements included in the Build Alternative were shown on Figure 1-3 in Chapter 1. Those improvements are described in more detail in Chapter 1, Proposed Project, of this environmental document and Chapter 1 of the *Traffic Study Report* (January 2018).

2.5.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

As previously described in Section 2.3, Community Impacts, many of the project improvements north of the SR-47 mainline may be constructed prior to any modification to the existing interchange. The work that would more substantially affect the local street traffic would take place during reconstruction of gores due to ramp closures and during intersection construction due to the rerouting of traffic to

other container terminal gates. Access to SR-47 would be maintained during any ramp and/or local street closures through the identification of detour routes on alternate freeway on- and off-ramps and local streets. The majority of on- and off-ramp relocations could generally be completed outside the current freeway footprint. If any closures are needed, closures would occur during off-peak and overnight hours, thereby minimizing delays to the traveling public. Closures would be coordinated with local jurisdictions as outlined in the Transportation Management Plan (Project Feature PF-T-1). Preliminary detours associated with construction work may be required for overnight closures during reconstruction of the WB and EB gores. Detours would be rerouted to North Gaffey Street or John S. Gibson Boulevard interchanges. Access into the WBCT would also likely be required during construction, but coordination with LAHD staff may prioritize other container terminal gates to reduce traffic through the intersection during construction. Construction could also temporarily affect existing sidewalks, temporarily impacting pedestrians.

The following project feature addresses the potential for short-term impacts related to traffic and transportation during construction of the Build Alternative.

PF-T-1 **Transportation Management Plan.** A Final Transportation Management Plan (TMP) will be developed in detail during final design. The TMP will be implemented by the construction contractor during project construction to address short-term traffic circulation and access effects during project construction. Specifically, if a TMP is prepared during final design, a qualified traffic engineer will prepare the TMP, which will include, but not be limited to, the elements described below to reduce traveler delays and enhance traveler safety during project construction. The TMP will be approved by the City of Los Angeles (City) and California Department of Transportation (Caltrans) District 7 during final design and will be incorporated into the plans, specifications, and estimates for implementation by the construction contractor.

The purpose of the TMP is to address short-term traffic and transportation impacts during construction of the project. The objectives of the TMP are to:

- Maintain traffic safety during construction
- Effectively maintain an acceptable level of traffic flow throughout the transportation system during construction
- Minimize traffic delays and facilitate reduction of the overall duration of construction activities
- Minimize detours and impacts to pedestrians and bicyclists
- Foster public awareness of the proposed project and related transportation and traffic impacts

The TMP will contain, but not be limited to, the following elements intended to reduce traveler delay and enhance traveler safety. These elements will be refined during final design and incorporated in the TMP for implementation during proposed project construction.

- **Public Information/Public Awareness Campaign (PAC).** The primary goal of the PAC is to educate motorists, business owners and operators, residents, elected officials, and government agencies about project construction activities and associated transportation impacts. The PAC is an important tool for reaching target audiences with important construction project information and is anticipated to include, but not be limited to:

    - Rideshare information
    - Brochures and mailers
    - Media releases
    - Paid advertising
    - Public meetings
    - Broadcast fax and email services
    - Telephone hotline
    - Notification to targeted groups
    - Commercial traffic reporters/feeds
    - Project website
    - Visual information
    - Local cable television and news
    - Internet postings

- **Traveler Information Strategies.** The effective implementation of a traveler information system during construction is crucial for enabling motorists to make informed decisions about their travel plans and options with real-time traffic information. That real-time traffic information will include information on mainline, ramp, lane, and arterial closures and detours; travel delays; access to adjacent land uses; "businesses are open" signing; and other signing and information to assist travelers in navigating through, around, and in construction areas. Key components of the traveler information system are anticipated to include, but not be limited to:

  - Fixed and portable changeable message signs
  - Ground-mounted signs
  - Automated work zone information systems
  - Highway advisory radio
  - Lane closure website
  - Caltrans highway information network
  - Bicycle and pedestrian information
  - Commute Smart website

- **Incident Management.** Effective incident management will ensure that incidents in and near construction areas are cleared quickly and do not result in substantial delays for the traveling public in the vicinity of work zones. Incident management includes, but is not limited to:

  - Caltrans Construction Zone Enhanced Enforcement Program (COZEEP)
  - Freeway Service Patrol
  - Traffic surveillance stations
  - Caltrans Transportation Management Center
  - Traffic management team
  - Towing services

- **Construction Strategies.** The TMP will include procedures to lessen the transportation effects of project-related construction activities and will include, but not be limited to, consideration of the following:

- Conflicts with other projects and special events
- Construction staging alternatives
- Mainline lane closures
- Local road closures
- Ramp and connector closures (no two consecutive on- or off-ramps in the same direction will be closed at the same time)
- Pedestrian and bicycle detours and facility closures
- Traffic control improvements
- Coordination with other projects
- Project phasing
- Traffic screens
- Truck traffic restrictions

- **Demand Management.** Temporarily reducing the overall traffic volumes on the project segment of State Route (SR) 47 could reduce the short-term adverse effects of construction on traffic operations. The TMP will include, but not be limited to, the following strategies that could reduce vehicular demand in the study area during project construction:

  - Rideshare incentives
  - Transit services
  - Shuttle services
  - Variable work hours and telecommuting
  - Park-and-ride lots

- **Alternate Route Strategies.** The TMP will provide strategies for notifying motorists, pedestrians, and bicyclists of planned construction activities. This notification will allow travelers to make informed decisions about their travel plans, including the consideration of possible alternate routes. The TMP will finalize the detour and alternate routes for motorists, specifically addressing the following:

  - Mainline lane closures
  - Ramp/connector closures
  - Local road closures

- Temporary highway or shoulder use
- Local street improvements
- Temporary detours and closures of bicycle and pedestrian facilities
- Traffic signal coordination

The construction contractor will implement the measures in the TMP during construction.

No Build Alternative

None of the improvements proposed under the Build Alternative would be constructed under the No Build Alternative. As a result, the No Build Alternative would not result in temporary impacts related to traffic and circulation or to pedestrian and bicycle facilities.

2.5.3.2 Permanent Impacts

The following tables provide detailed information on traffic operations under the Build and No Build Alternatives in the Opening Year (2023):

- Table 2.5.2 summarizes the freeway mainline, ramp, and weaving LOS during the a.m. and p.m. peak hours under Existing Baseline, No Build Alternative—Opening Year (2023), and Build Alternative—Opening Year (2023) conditions.
- Table 2.5.3 summarizes the intersection LOS under Existing Baseline, No Build Alternative—Opening Year (2023), and Build Alternative—Opening Year (2023) conditions.
- Table 2.5.4 summarizes the ramp storage adequacy under Existing Baseline, No Build Alternative—Opening Year (2023), and Build Alternative—Opening Year (2023) conditions.

The following tables provide detailed information on traffic operations under the Build and No Build Alternatives in the Design Year (2045):

- Table 2.5.5 summarizes the freeway mainline, ramp, and weaving LOS during a.m. and p.m. peak hours under Existing Baseline, No Build Alternative—Design Year (2045), and Build Alternative—Design Year (2045) conditions.
- Table 2.5.6 summarizes the intersection LOS under Existing Baseline, No Build Alternative—Design Year (2045), and Build Alternative—Design Year (2045) conditions.

- Table 2.5.7 summarizes the ramp storage adequacy under Existing Baseline, No Build Alternative—Design Year (2045), and Build Alternative—Design Year (2045) conditions.

As indicated previously, 2023 has been identified as the opening year for the project, and 2045 has been identified as the design year. The traffic impacts and operations under the Build Alternative and No Build Alternative in 2023 and 2045 are discussed by alternative below.

Build Alternative (Preferred Alternative)

Mainline and Ramps

Opening Year (2023)

As identified in Table 2.5.2, all freeway mainline and weaving segments within the project limits are projected to operate at LOS D or better during the a.m. and p.m. peak hours under the Build Alternative. The SR-47 WB off-ramp to Harbor Boulevard freeway ramp segment is projected to operate at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour, while the SR-47 EB on-ramp to Harbor Boulevard freeway ramp segment is projected to operate at LOS C during both peak hours under the Build Alternative.

The Build Alternative includes a new WB off-ramp on Front Street at the existing WBCT Gate signalized intersection, as well as a new WB on-ramp terminus located approximately 650 feet north of its existing terminus and sharing the same intersection as the new WB off-ramp. The relocation of the WB off-ramp to Front Street would eliminate weaving segments with the EB off-ramp, resulting in a reduction in the number of weaving segments within the project limits. The EB off-ramp would also be widened to a two-lane off-ramp and the ramp cross-section expanded from three to four lanes at its terminus. The EB on-ramp would also be modified to increase its acceleration length for traffic merging onto the mainline, which would improve the operation of merge/diverge segments within the study area. With these ramp modifications proposed by the Build Alternative under Opening Year (2023) conditions, traffic operations along the mainline segments, freeway ramp segments, and weaving segments within the study area would be the same as with the No Build Alternative for both the a.m. and p.m. peak hours. As identified in Table 2.5.2, the consistent LOS on the ramps results in mainline, ramp, and weaving segments under the Build Alternative—Opening Year (2023) condition operating at the same LOS as under the No Build Alternative—Opening Year (2023) condition.

Design Year (2045)

As shown in Table 2.5.5, under the Build Alternative in 2045, two freeway mainline segments, one ramp segment, and one weaving segment are projected to operate at LOS D or better during both the a.m. and p.m. peak hours. The SR-47 WB east of Harbor Boulevard freeway segment is projected to operate at LOS F during both the a.m. and p.m. peak hours, and the SR-47 WB between Harbor Boulevard ramps freeway segment is projected to operate at LOS E in the a.m. peak hours and LOS D in the p.m. peak hours. The SR-47 WB off-ramp to Harbor Boulevard ramp segment is projected to operate at LOS F in both the a.m. and p.m. peak hours. The SR-47 WB between Harbor Boulevard on-ramp and I-110 NB off-ramp weaving segment is projected to operate at LOS E in the a.m. peak hour and LOS D in the p.m. peak hour.

The previously described ramp improvements would improve traffic operations on the SR-47 EB between I-110 NB on-ramp and Harbor Boulevard off-ramp weave segment when compared to the 2045 No Build Alternative. As identified in Table 2.5.5, the consistent LOS on the ramps would result in mainline, ramp, and weaving segments under the Build Alternative—Design Year (2045) condition operating at the same LOS as under the No Build Alternative—Design Year (2045) condition. The SR-47 EB between I-110 NB on-ramp and Harbor Boulevard off-ramp weave segment would improves to LOS C in the a.m. peak hour (from LOS D under the No Build Alternative) and LOS B in the p.m. peak hour (from LOS C under the No Build Alternative) under the Build Alternative—Design Year (2045) scenario.

Intersections

Opening Year (2023)

As shown in Table 2.5.3, under the Build Alternative in 2023, both of the study area intersections are projected to operate at LOS D or better during both the a.m. and p.m. peak hours. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection would operate at LOS C in both the a.m. and p.m. peak hours in the Opening Year (2023) scenario[1]. Compared to the No Build Alternative the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would

[1] A comparison to the No Build Alternative is not provided because the Front Street and SR 47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build scenario.

improve to LOS C from LOS D in the a.m. peak hour and remain at LOS D in the p.m. peak hour in the Opening Year (2023) scenario.

Design Year (2045)

Table 2.5.6 outlines the intersection operations under the Build Alternative in 2045. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection would operate at LOS E in the a.m. peak hour LOS D in the p.m. peak hour[1]. Compared to the No Build Alternative the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would improve to LOS E from LOS F in the a.m. peak hour and to LOS D from LOS F in the p.m. peak hour.

Ramp Capacity

Opening Year (2023)

Table 2.5.4 includes a summary of off-ramp storage adequacy determinations in 2023. Storage lengths provided on all off-ramps are projected to be adequate under Build Alternative—Opening Year (2023) conditions except for one lane. As described previously, the Build Alternative includes ramp improvements, which include a new WB off-ramp on Front Street at the existing WBCT Gate signalized intersection, widening of the EB off-ramp to a two-lane off-ramp, and expansion of the ramp cross-section from three to four lanes at its terminus. When compared to No Build Alternative—Opening Year (2023) conditions, ramp storage at Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street is projected to exceed capacity at four fewer lanes in the Build Alternative—Opening Year (2023) scenario. Ramp storage is projected to exceed capacity at the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street SB right lane, which would also exceed capacity under the No Build Alternative—Opening Year (2023) scenario. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build Alternative.

Design Year (2045)

Under Build Alternative—Design Year (2045) conditions, four of six ramp lanes at the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection would exceed capacity. Under No Build Alternative—Design Year

[1] A comparison to the No Build Alternative is not provided because the Front Street and SR 47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build scenario.

(2045) conditions, five of six ramp lanes at the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection would exceed capacity. As part of the proposed project, a new off-ramp intersection would be added at Front Street and SR-47 WB ramps/WBCT Gate 2. Two of the seven ramp lanes would have inadequate storage lengths in the Build Alternative—Design Year (2045) scenario. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build Alternative.

Bicycle and Pedestrian Facilities

The Build Alternative includes minor modifications along Front Street and Harbor Boulevard to accommodate the permanent improvements to the SR-47 ramps. Specifically, where modifications to sidewalks and/or on-road marked bicycle lanes are necessary as part of the proposed improvements, those modifications would be consistent with ADA accessibility requirements. The permanent improvements proposed under the Build Alternative would not affect the existing Class II bike lanes within the project limits.

No Build Alternative

Mainline and Ramps

Opening Year (2023)

As shown in Table 2.5.3, all freeway mainline, ramp, and weaving segments within the project limits under the No Build Alternative—Opening Year (2023) condition are projected to operate similar to the Build Alternative—Opening Year (2023) condition. With increased capacity demands, traffic operations within the study area are projected to deteriorate in both the a.m. and p.m. peak hours in 2023 under the No Build Alternative.

Design Year (2045)

As shown in Table 2.5.5, freeway mainline, ramp, and weaving segments within the project limits under the No Build Alternative—Design Year (2045) condition are projected to operate similar to the Build Alternative—Design Year (2045) condition, with the exception of the SR-47 EB between I-110 NB on-ramp and Harbor Boulevard off-ramp weaving segment. This weaving segment is projected to operate at LOS D in the a.m. peak hour and LOS C in the p.m. peak hour, which is a lower LOS when compared to the Build Alternative—Design Year (2045) scenario.

Intersections

Opening Year (2023)

As indicated in Table 2.5.3, the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would operate at LOS D under the No Build Alternative—Opening Year (2023) condition. The Front Street and Knoll Drive/WBCT Gate 2 intersection would operate at LOS A under the No Build Alternative—Opening Year (2023) condition. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build Alternative.

Design Year (2045)

As indicated in Table 2.5.6, the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection is projected to operate at LOS F during both the a.m. and p.m. peak hours. The Front Street and Knoll Drive/WBCT Gate 2 intersection would operate at LOS B or better under the No Build Alternative—Opening Year (2023) condition. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build Alternative.

Ramp Capacity

As indicated in Tables 2.5.4 and 2.5.7, storage lengths provided for the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection off-ramp lanes are projected to be inadequate under both the Opening Year (2023) and Design Year (2045) No Build Alternative conditions, except for the SB left lane. The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build Alternative.

Bicycle and Pedestrian Facilities

None of the improvements proposed under the Build Alternative would be constructed under the No Build Alternative; therefore, no permanent impacts related to pedestrian or bicycle facilities would occur.

2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project feature outlined above in Section 2.5.3.1, no adverse impacts to traffic and transportation/bicycle and pedestrian facilities would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

Table 2.5.1: Transportation Impacts—Intersections

Level of Service	Final Delay (seconds)	Project-Related Increase in Delay (seconds)
C	>20-35	≥ 6.0
D	>35-55	≥ 4.0
E	>55-80	≥ 2.5
F	>80	≥ 2.5

Source: *Los Angeles Department of Transportation Traffic Study Policies & Procedures* (August 2014)

Table 2.5.2: 2023 Peak-Hour Level of Service Summary—SR-47 Mainline, Ramps, and Weaving

Location Description	Existing Baseline		No Build Alternative—Opening Year (2023)		Build Alternative (Preferred Alternative)—Opening Year (2023)	
	AM	PM	AM	PM	AM	PM
Mainline						
SR-47 eastbound between Harbor Boulevard ramps	B	B	B	B	B	B
SR-47 eastbound east of Harbor Boulevard	B	C	C	C	C	C
SR-47 westbound east of Harbor Boulevard	C	C	D	D	D	D
SR-47 westbound between Harbor Boulevard ramps	C	C	C	C	C	C
Ramps						
SR-47 eastbound on-ramp from Harbor Boulevard	C	C	C	C	C	C
SR-47 westbound off-ramp to Harbor Boulevard	D	D	D	**E**	D	**E**
Weaving						
SR-47 eastbound between I-110 northbound on-ramp and Harbor Boulevard off-ramp	B	B	B	B	B	B
SR-47 westbound between Harbor Boulevard on-ramp and I-110 northbound off-ramp	B	B	C	C	C	C

Source: *Traffic Study Report* (January 2018).
BOLD indicates unsatisfactory level of service
I = Interstate
SR = State Route

Table 2.5.3: 2023 Peak-Hour Level of Service Summary—Intersections

Intersection	Existing Baseline		No Build Alternative—Opening Year (2023)		Build Alternative (Preferred Alternative)—Opening Year (2023)	
	AM	PM	AM	PM	AM	PM
Front Street and SR-47 westbound ramps/WBCT Gate 2	A	B	A	A	C	C
Front Street/Harbor Boulevard and SR-47 eastbound ramps/ Swinford Street	C	C	D	D	C	D

Source: *Traffic Study Report* (January 2018).
SR = State Route WBCT = West Basin Container Terminal

Table 2.5.4: 2023 Ramp Storage Adequacy Summary

Intersection	Movement	Existing	Adequate Storage?	
			No Build Alternative—Opening Year (2023)	Build Alternative (Preferred Alternative)—Opening Year (2023)
Front Street and SR-47 westbound ramps/WBCT Gate 2	NBL	N/A	N/A	Yes
	SBL	N/A	N/A	Yes
	SBTR	N/A	N/A	Yes
	EBL	N/A	N/A	Yes
	EBT	N/A	N/A	Yes
	EBR	N/A	N/A	Yes
	WBL	N/A	N/A	Yes
Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street	NBL	Yes	**No**	Yes
	SBL	Yes	Yes	Yes
	SBR	Yes	**No**	**No**
	EBL	Yes	**No**	Yes
	EBLTR	Yes	**No**	Yes
	EBR	Yes	**No**	Yes

Source: *Traffic Study Report* (January 2018).
BOLD indicates inadequate storage
EBL = eastbound left
EBLTR = eastbound left through
EBR = eastbound right
EBT = eastbound through
N/A = not applicable
NBL = northbound left
SBL = southbound left
SBR = southbound right
SBTR = southbound right through
SR = State Route
WBCT = West Basin Container Terminal
WBL = westbound left

Table 2.5.5: 2045 Peak-Hour Level of Service Summary—SR-47 Freeway Mainline, Ramps, and Weaving

Location Description	Existing Baseline		No Build Alternative—Design Year (2045)		Build Alternative (Preferred Alternative)—Design Year (2045)	
	AM	PM	AM	PM	AM	PM
Mainline						
SR-47 eastbound between Harbor Boulevard ramps	B	B	C	B	C	B
SR-47 eastbound east of Harbor Boulevard	B	C	D	C	D	C
SR-47 westbound east of Harbor Boulevard	C	C	**F**	**F**	**F**	**F**
SR-47 westbound between Harbor Boulevard ramps	C	C	**E**	D	**E**	D
Ramps						
SR-47 eastbound on-ramp from Harbor Boulevard	C	C	D	C	D	C
SR-47 westbound off-ramp to Harbor Boulevard	D	D	**F**	**F**	**F**	**F**
Weaving						
SR-47 eastbound between I-110 northbound on-ramp and Harbor Boulevard off-ramp	A	B	D	C	C	B
SR-47 westbound between Harbor Boulevard on-ramp and I-110 northbound off-ramp	C	C	**E**	D	**E**	D

Source: *Traffic Study Report* (January 2018).
BOLD indicates unsatisfactory level of service
I = Interstate
SR = State Route

Table 2.5.6: 2045 Peak-Hour Level of Service Summary—Intersections

Intersection	Existing Baseline		No Build Alternative—Design Year (2045)		Build Alternative (Preferred Alternative)—Design Year (2045)	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Front Street and SR-47 westbound ramps/WBCT Gate 2	A	B	B	A	**E**	D
Front Street/Harbor Boulevard and SR-47 eastbound ramps/Swinford Street	C	C	**F**	**F**	**E**	D

Source: *Traffic Study Report* (January 2018)
BOLD indicates unsatisfactory level of service
SR = State Route
WBCT = West Basin Container Terminal

Table 2.5.7: 2045 Ramp Storage Adequacy Summary

Intersection	Movement	Existing	Adequate Storage?	
			No Build Alternative—Design Year (2045)	**Build Alternative (Preferred Alternative)—Design Year (2045)**
Front Street and SR-47 westbound ramps/WBCT Gate 2	NBL	N/A	N/A	**No**
	SBL	N/A	N/A	Yes
	SBTR	N/A	N/A	Yes
	EBL	N/A	N/A	**No**
	EBT	N/A	N/A	Yes
	EBR	N/A	N/A	Yes
	WBL	N/A	N/A	Yes
Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street	NBL	Yes	**No**	**No**
	SBL	Yes	Yes	**No**
	SBR	Yes	**No**	**No**
	EBL	Yes	**No**	Yes
	EBLTR	Yes	**No**	**No**
	EBR	Yes	**No**	Yes

Source: *Traffic Study Report* (January 2018).
BOLD indicates inadequate storage
EBL = eastbound left
EBLTR = eastbound left through
EBR = eastbound right
EBT = eastbound through
N/A = not applicable
NBL = northbound left
SBL = southbound left
SBR = southbound right
SBTR = southbound right through
SR = State Route
WBCT = West Basin Container Terminal
WBL = westbound left

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2.6 Visual/Aesthetics

2.6.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

2.6.2 Affected Environment

The information in this section is based on the *Visual Impact Assessment Memorandum* (VIA Memorandum) (May 2018) and the City of Los Angeles (City) General Plan. The VIA Memorandum follows the recommended methodology in the publication *Visual Impact Assessment for Highway Projects* (FHWA 2015).

2.6.2.1 Visual Setting

The proposed project is located at the State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange between just east of Interstate (I) 110 and just west of the Port of Los Angeles (POLA) in the City of Los Angeles, Los Angeles County (County), California. The proposed project is located in the Coastal Plain region of Southern California. The landscape is characterized by a predominantly built environment consisting mostly of highway components (mainline, ramps, and interchanges); highway structures (overpass bridges and noise barriers); port facilities and components (cranes, docks, containers, and inspection facilities); commercial and residential buildings (residential communities); and vegetated areas situated alongside the highway, at ramps and interchanges, in parks, and in adjacent communities. The land use within the project area is primarily urban, with designated areas consisting mostly of transportation, communications, and utilities (POLA uses); commercial; residential; and open space and recreation uses.

The project area is relatively flat and is mainly urban in character. There are no distinct natural open spaces or natural features commonly found in designated scenic highways, such as undulating landforms, immediate open views of lakes, mountains, or preserved vegetation. As a result, existing views within and surrounding the project area are very limited.

The eastern portion of the project area is within the Coastal Zone, and while there is no California Department of Transportation (Caltrans) officially designated or eligible scenic highway, the City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. This designation seeks to preserve the views of the Vincent Thomas Bridge, views of historic San Pedro, and LAHD.

The City's General Plan includes the following policies to protect visual resources that are relevant to the proposed project.

Land Use Element (2016)

- **LU18.1 Maintain visual resources:** Protect the scenic and visual qualities of San Pedro as a local and regional resource, with permitted development sited and designed to: protect public views to and along the ocean, harbor, and scenic coastal areas; minimize the alteration of natural landform; be visually compatible with the character of the surrounding area; and prevent the blockage of existing public views for designated public scenic view areas and Scenic Highways.
- **LU18.2 Preserve access to coastal views:** Ensure public visual access to coastal views by means of appropriately located scenic overlooks, turnouts, view spots and other areas for limited vehicular parking, especially along designated Scenic Highways and Bikeways.
- **LU18.3 Protect public views from Scenic Highways:** Preserve existing public scenic views of the ocean and harbor from designated Scenic Highways, and designated scenic view sites. Development adjacent to a Scenic Highway shall protect public views to the ocean to the maximum extent feasible, be adequately landscaped to soften the visual impact of the development, and, where appropriate, provide hiking or biking.

Mobility Element (2016)

- **Policy 2.16:** Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.

Conservation Element (2001)

- **Section 15 Policy:** Continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing land forms (e.g., ridge lines, bluffs, unique geologic features) and unique scenic features (historic, ocean, mountains, unique natural features) and/or make possible public view or other access to unique features or scenic views.

2.6.3 Environmental Consequences

2.6.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Construction of the Build Alternative would result in temporary visual impacts as a result of construction activities, including: vegetation removal; grading; and use of night lighting, temporary structures, hauling equipment, construction staging or laydown areas, and signs indicating traffic detours. Even though the temporary visual impacts from construction activities may be unavoidable to some extent, avoidance and minimization would not be necessary during the construction period due to the temporary nature of these impacts. Once construction is complete, permanent highway planting and replacement planting measures would be implemented to enhance the visual character of the project area.

No Build Alternative

The No Build Alternative would not include the construction of any of the project improvements for the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange and, therefore, would not result in changes in views to/from the project area. Therefore, the No Build Alternative would not result in short-term visual impacts on and in the vicinity of the project area of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange.

2.6.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

Implementation of the Build Alternative would introduce additional man-made components to the existing built environment, with key design changes consisting of new traveled ways, additional ramp lanes, new ramps, and retaining walls. Where feasible, the proposed project may consider implementing nautical-themed aesthetic treatments for proposed new structures to match the existing aesthetic treatment theme of similar existing structures in the project area. The proposed project does not include any grade separations; therefore, the heights and locations of the proposed

ramp realignments and other modifications would remain generally consistent with the existing condition and the project area's existing urbanized setting would remain relatively unchanged. Existing trees and other vegetation would be replaced by concrete, and new landscaping would be planted where feasible as part of the Build Alternative. The Build Alternative changes would be perceived as extensions of the existing highway features rather than new, contrasting features. With incorporation of Project Features PF-VIS-1 through PF-VIS-2 and Measure VIS-3 (Section 2.6.4), the permanent visual impacts of the Build Alternative would not be adverse.

PF-VIS-1 **Preservation of Existing Landscape.** Damage to existing vegetation (especially mature, established trees) within the project limits or in close proximity to the project limits will be minimized as much as possible.

PF-VIS-2 **Replacement Landscape and Irrigation in Areas Impacted by Construction.** All areas disturbed by the proposed roadway improvements or grading operations will receive replacement planting (with native and/or drought resistant plants) where feasible to lessen the impacts of construction. All proposed landscaping within State right-of-way will utilize California Department of Transportation (Caltrans) approved plant materials and match existing in-kind plant species. All proposed landscaping will conform to the latest Model Water Efficient Landscape Ordinance.

No Build Alternative

The No Build Alternative would not include the construction of any of the project improvements on the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange and, therefore, would not result in changes in views to/from the project site. Therefore, the No Build Alternative would not result in long-term visual impacts on and in the vicinity of the project area.

2.6.4 Avoidance, Minimization, and/or Mitigation Measures

Along with the project features identified in Section 2.6.3.2, Measure VIS-3 would avoid and/or minimize potential project effects related to visual quality.

VIS-3 **Aesthetic Treatments for New Retaining Walls and Elevated Features.** To reduce the visual impact of new retaining walls and other elevated structures, the use of aesthetic treatments consisting of color,

textures, and/or artistic designs compatible with existing walls/structures will be determined.

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CULTURAL RESOURCES

2.7 Cultural Resources

2.7.1 Regulatory Setting

The term "cultural resources" as used in this document refers to the "built environment" (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including "historic properties," "historic sites," "historical resources," and "tribal cultural resources." Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966 , as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation (Caltrans) went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the ACHP's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term "tribal cultural resources" to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as

identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object, which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way.

2.7.2 Affected Environment

This section summarizes information from the *Historic Property Survey Report* (HPSR) (LSA Associates, Inc., August 2018). The section also compiles information from technical studies that accompany the HPSR, including the *Archaeological Survey Report* (ASR) (LSA Associates, Inc., December 2018) and the *Historical Resources Evaluation Report* (HRER) (LSA Associates, Inc., July 2018). The SHPO concurred with eligibility determinations on September 20, 2018

2.7.2.1 Methods

Area of Potential Effects

The Area of Potential Effects (APE) is established to identify the geographic area within which the proposed project may directly or indirectly affect historic properties, if any such properties exist. The APE for this project extends nearly 1,875 feet along SR-47 west from North Front Street/North Harbor Boulevard. It includes construction of on and off ramps from North Front Street/North Harbor Boulevard to/from SR-47. The APE also extends approximately 1,200 feet north of SR-47 and 500 feet south of SR-47. The project APE totals 47.48 acres.

The Direct APE comprises 34.39 acres of the total APE and includes areas where physical impacts from the project would occur. These are generally limited to the project's proposed and existing rights-of-way and include the horizontal and vertical limits associated with ground-disturbing activities. The vertical APE extends to a maximum depth of 50 feet for cuts into existing hillsides and cuts are also proposed to the 30 foot tall slope on the eastbound SR-47 off ramp. Excavation to depths of 10 feet is proposed for utility relocation and to depths of eight (8) feet for drainage. The project APE also includes areas of indirect effects that encompass areas that may be indirectly affected by visual, noise, and other effects. Areas of indirect effects

generally include properties directly adjacent to the proposed rights-of-way unless they are undeveloped or unless potential effects would be unlikely due to sufficient distance between the construction footprint and any existing development.

Record Search

On December 14, 2017, a record search was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University, Fullerton. The CHRIS is maintained under the direction of the California Office of Historic Preservation. The records search included a review of all recorded historic and prehistoric sites within a 0.5-mile radius of the APE, as well as a review of known cultural resource survey, excavation, and other studies. For a detailed description of the record search results, refer to the ASR (December 2018). Additionally, the following inventories were examined during the SCCIC record search:

- National Register of Historic Places (National Register)
- California Register of Historical Resources (California Register)
- California Historical Landmarks (CHL)
- California Points of Historical Interest (CPHI)
- California Historic Resources Inventory (HRI)

In addition to the research conducted at the SCCIC, further background research was conducted using published literature on local and regional history, online resources regarding the history and development of the study area, the Los Angeles County Assessor's online database, the Caltrans historic bridge inventories, and historic aerial photographs and maps of the project vicinity. Once resources requiring evaluation were identified, additional research was conducted to develop relevant historic contexts and property-specific chronologies. This context was used during the analysis of historic archaeological resources and the historic built environment. For details of the historic context of the project APE, refer to Chapter IV – Historical Overview of the HRER (July 2018). The following groups, organizations, and individuals were contacted to access historical information pertinent to the parcels within the project APE and the project vicinity:

- San Pedro Bay Historical Society
- Los Angeles Conservancy
- Janet Hansen, Deputy Manager, Office of Historic Resources, Department of City Planning

- Los Angeles City Historical Society
- Los Angeles Railroad Heritage Foundation
- Railway and Locomotive Historical Society, Inc., Southern California Chapter
- The Electric Railway Historical Association of Southern California
- Pacific Electric Railway Historical Society

Field Surveys

On January 22, 2018, a pedestrian survey of 15.36 acres of the 34.39-acre Direct APE was conducted to identify cultural resources, which is described in the ASR (December 2018). Because much of the APE is within active freeway and street right-of-way, access was not safely available in all areas. Areas of exposed ground that could be accessed safely, even if vegetated, were surveyed by walking linear transects separated by seven (7) to 10 meters over larger areas and opportunistically over smaller areas. Inaccessible areas were visually inspected from a distance. Special attention was given to areas that exhibited exposed sediment, cut slopes, or rodent burrow back-dirt. Areas within the APE that were not surveyed include existing freeways, paved roads, concrete plazas and sidewalks, paved parking areas, the dog park, buildings, and structures.

On May 11, 2018, an intensive-level pedestrian survey of the historic-period built environment located within the APE was completed under the supervision of an architectural historian and is described in the HRER (July 2018). During the survey, built environment resources within the APE were photographed, and their locational information noted on APE maps. For detailed notations regarding their current conditions, integrity levels, physical characteristics, and setting, refer to the HRER (July 2018).

Native American Consultation

In conjunction with the project, consultation was conducted with the Native American Heritage Commission (NAHC) and with a number of Native American Tribes (groups and individuals) to comply with Section 106 of the NHPA and Assembly Bill (AB) 52. The NAHC was contacted on December 14, 2017, to conduct a Sacred Lands File (SLF) search of the APE. On December 21, 2017, the NAHC responded by stating that the SLF review identified no Native American cultural resources within the project APE. The NAHC also recommended that 17 Native American individuals representing Native American Tribal groups be contacted for information regarding cultural resources that could be affected by the project.

Chapter 4, Comments and Coordination, offers detailed information regarding Native American consultation. However, the following Native American Tribes, groups, and individuals were contacted via letter sent by certified mail on December 26, 2017, and again by two rounds of follow-up emails or telephone calls between January 18 and 24, 2018, depending on whether the previous contact was successful:

- Barbareño/Ventureño Band of Mission Indians - Julie Lynn Tumamait-Stenslie, Chair *Chumash*
- Barbareño/Ventureño Band of Mission Indians - Patrick Tumamait *Chumash*
- Barbareño/Ventureño Band of Mission Indians - Eleanor Arrellanes *Chumash*
- Barbareño/Ventureño Band of Mission Indians - Raudel Joe Banuelos, Jr. *Chumash*
- Fernandeño Tataviam Band of Mission Indians - Rudy Ortega, Jr., Tribal President *Fernandeño Tataviam*
- Gabrieleno Band of Mission Indians – Kizh Nation - Andrew Salas, Chairperson *Gabrielino*
- Gabrieleno/Tongva San Gabriel Band of Mission Indians - Anthony Morales, Chairperson *Gabrielino-Tongva*
- Gabrielino/Tongva Nation - Sandonne Goad, Chairperson *Gabrielino-Tongva*
- Gabrielino-Tongva Tribe - Linda Candelaria *Gabrielino*
- Gabrielino-Tongva Tribe - Charles Alvarez, Chairperson *Gabrielino*
- Kern Valley Indian Community - Robert Robinson, Chairperson *Tubatulabal Kawaiisu*
- Kitanemuk & Yowlumne Tejon Indians - Delia Dominguez, Chairperson *Yowlumne Kitanemuk*
- San Fernando Band of Mission Indians - John Valenzuela, Chairperson *Fernandeño Tataviam Serrano Vanyume Kitanemuk*
- San Manuel Band of Mission Indians - Lee Clauss, Director—Cultural Resources Management Department *Serrano*
- San Manuel Band of Mission Indians - Lynn Valbuena *Serrano*
- Santa Ynez Band of Chumash Indians - Kenneth Kahn, Chairperson *Chumash*
- Soboba Band of Luiseño Indians - Joseph Ontiveros, Cultural Resource Department *Luiseno*

2.7.2.2 Results

Archaeological Results

An HPSR (August 2018) and ASR (December 2018) were completed for the project. No archaeological sites were identified in the APE through archival research or the field survey.

The survey showed that all surveyable areas of the APE exhibited high levels of disturbance from the freeway and nearby construction. Disturbance included bulldozed local sediment mixed with gravel, asphalt, concrete, and other debris, as well as artificial fill and recent trash. Areas north and northwest of Front Street and west of Harbor Boulevard are artificial fill. Freeway areas are often elevated using locally bulldozed sediment that sometimes contains quantities of fossil shell. As such, the likelihood of encountering intact archaeological resources is very low.

The entire APE has undergone extensive disturbance from previous freeway, road, residential, and harbor construction activities by grading, paving, utility placement, and other historic land uses. Prior construction of SR-47 and the Harbor Boulevard on and off-ramps was a large engineering and earthmoving project and the disturbance to the adjacent areas were extensive.

Built Environment Results

Within the project APE, one property was previously determined eligible for the NRHP and is a significant resource for the purposes of CEQA:

Name	City	OHP Code
Vincent Thomas Bridge	Los Angeles	2S

Approximately 300 feet of the west end of this NRHP-eligible, State-owned bridge is within the project APE. However, no physical changes to the bridge or its support structure are proposed as part of this undertaking. The changes to the SR-47 ramps will occur immediately west of the bridge and the Harbor Boulevard lane modifications are beneath the bridge and will not physically affect the resource. These changes will minimally affect the setting, but because the bridge is significant for its contribution to the growth and development of the Port and for its design/engineering, setting is not a crucial aspect of integrity for this historic property. Therefore, the proposed undertaking will not affect any historic properties.

One property was formally evaluated for listing on the NRHP and determined not eligible. The SHPO concurred with this finding on September 20, 2018. This property is also not a significant resource for the purposes of CEQA.

Name	Location	City	OHP Code
Pacific Electric Railway, Harbor Belt Line segment (19-188896)	Generally the east side of Harbor Boulevard and south side of Knoll Hill	Los Angeles	6Z

In addition, one state-owned bridge, Harbor Blvd. Off-Ramp UC (53-0807) is within the APE. It is listed in the Caltrans Bridge Inventory as Category 5 – not eligible for listing in the NRHP. That determination is still valid. All other built environment properties within the project APE have been determined exempt from further evaluation pursuant to Attachment 4 of the Caltrans Section 106 PA as Property Types 2, 3, 4, or 6, which are properties that are modern or have lost integrity because of alterations.

2.7.3 Environmental Consequences

2.7.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Construction of the Build Alternative would not result in temporary impacts to cultural resources because any impacts to those types of resources during construction would be considered permanent, as described later in Section 2.7.3.2.

No Build Alternative

Under the No Build Alternative, none of the proposed improvements to SR-47 would be constructed. The No Build Alternative would maintain the existing conditions; therefore, the No Build Alternative would not result in temporary impacts related to cultural resources as a result of construction activities.

2.7.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

There is one historic property within the project APE that is eligible for inclusion in the National Register, the Vincent Thomas Bridge. However, no physical changes to the bridge or its support structure are proposed as part of this undertaking. The changes to the SR-47 ramps will occur immediately west of the bridge and the Harbor Boulevard lane modifications are beneath the bridge and will not physically affect the resource. These changes will minimally affect the setting, but because the bridge is significant for its contribution to the growth and development of the Port and for its

design/engineering, setting is not a crucial aspect of integrity for this historic property. Therefore, the Build Alternative would not have a direct effect on the historic property, nor would it indirectly alter the setting of the bridge in a way that affects its ability to convey its historic significance.

The Pacific Electric Railway's Harbor Belt Line is not eligible for listing in the National Register. The SHPO concurred with eligibility determinations on September 20, 2018. Based on the findings of the HPSR (August 2018), and pursuant to the Section 106 PA, the finding for the project is No Historic Properties Affected per 36 CFR 800.4.

Previously Undocumented Cultural Materials

There is always a potential for previously undocumented cultural materials or human remains to be unearthed during site preparation, grading, or excavation for the Build Alternative. Those potential effects would be avoided or minimized through Project Features PF-CR-1 and PF-CR-2.

PF-CR-1 **Discovery of Cultural Materials.** If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor will divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. At that time, coordination will be maintained with the California Department of Transportation (Caltrans) District 7 Environmental Branch Chief or the District 7 Native American Coordinator to determine an appropriate course of action. If the discovery of cultural materials occurs outside the Caltrans right-of-way, then coordination with the appropriate local agency will be conducted.

PF-CR-2 **Discovery of Human Remains.** If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who pursuant to California Public Resources Code (PRC) Section 5097.98, will then notify the Most

Likely Descendant (MLD). At that time, the persons who discovered the remains will contact the Caltrans District 7 Environmental Branch Chief or the District 7 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of California PRC 5097.98 are to be followed as applicable.

Section 4(f) Resources

As noted earlier, one National Register eligible resource was identified within the APE (HPSR August 2018). However, as described above it was determined that the Build Alternative would not affect this historic property. Therefore, there are no cultural resources present within the APE that would trigger the requirements for protection under Section 4(f), and no further discussion of those types of resources is provided relative to the requirements of Section 4(f).

No Build Alternative

Under the No Build Alternative, none of the proposed improvements to SR-47 would be constructed. The No Build Alternative would maintain the existing conditions; therefore, it would not result in permanent adverse impacts related to cultural resources.

2.7.4 Avoidance, Minimization, and/or Mitigation Measures

Along with the project features identified in Section 2.7.3.2, Measures CR-3 and CR-4 would avoid and/or minimize potential project effects by involving the Kizh Nation in cultural training and supervised field spot checks prior to and during construction.

CR-3 **Cultural Training.** The Kizh Nation will be involved in any cultural training prior to construction.

CR-4 **Field Spot Checks.** Supervised field spot checks will be conducted with the Kizh Nation during construction.

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PHYSICAL ENVIRONMENT

2.8 Hydrology and Floodplains

2.8.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as "the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year." An encroachment is defined as "an action within the limits of the base floodplain."

2.8.2 Affected Environment

This section is based on the *Stormwater Data Report* (December 2018) prepared for the proposed project.

The proposed project is within the Los Angeles Harbor Watershed, which is part of the Dominguez Channel and Los Angeles/Long Beach Harbors (LA/LB Harbors) Watershed Management and Hydrologic Units. The Dominguez Channel Watershed encompasses approximately 133 square miles, including over 15 cities and parts of Los Angeles County. The watershed is defined by a network of storm drains and smaller flood control channels that are within or pass through Inglewood to the north, Compton to the east, Torrance to the west, and the federal breakwaters of the LA/LB

Harbors to the south.[1] There are five subwatersheds associated with the Dominguez Channel Watershed. The Upper and Lower Channels of the watershed drain directly into the Dominguez Channel, while the remaining three subwatersheds include the LA/LB Harbors, Machado Lake, and retention basins.

Over 90 percent of the land in the watershed is developed, and approximately 62 percent of the storm water runoff from these lands drains to the Dominguez Channel.[2] Watershed-wide average annual runoff is approximately 28 billion gallons, with the City of Los Angeles contributing about 10 percent (2.8 billion gallons).[3]

The project area is mapped on three Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). The map numbers for maps covering the project area are FIRM No. 06037C1945F (revised September 26, 2008), FIRM No. 06037C2031F (revised September 26, 2008), and FIRM No. 06037C2032F (revised September 26, 2008). Portions of the study area are located within Zone X, which is outside the 100-year floodplain but within the 0.2 percent annual chance flood (500-year flood); areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood. The FEMA FIRMs are provided in Appendix F.

Floodplains and wetlands in their natural or relatively undisturbed state provide natural and beneficial water resource values (e.g., natural moderation of floods, water quality maintenance, and groundwater recharge), living resource values (e.g., fish, wildlife, and plant species), and cultural resource values (e.g., open space, archaeological and historical resources, natural beauty, scientific study, outdoor education, and recreation). In the project area, storm water runoff would be away

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1 Los Angeles Harbor Department. 2008. *San Pedro Waterfront Project Draft Environmental Impact Statement/Environmental Impact Report*. Section 3.14, Water Quality, Sediments, and Oceanography.

2 Los Angeles Harbor Department. 2008. *San Pedro Waterfront Project Draft Environmental Impact Statement/Environmental Impact Report*. Section 3.14, Water Quality, Sediments, and Oceanography.

3 Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division. 2009. *Water Quality Compliance Master Plan for Urban Runoff*. Chapter 2. May.

from the freeway pavement areas, toward localized storm drain collection facilities, and then to an existing storm drain pipeline system underlying Front Street/Harbor Boulevard. The nearest receiving water body within the project limits is the LA/LB Harbors Inner Harbor, located approximately 0.3 mile east of the project site.

Beneficial water resource values are identified in the Los Angeles Regional Water Quality Control Board's (LARWQCB) *Water Quality Control Plan for the Los Angeles Region* (Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties). The following existing beneficial uses were identified for the Dominguez Channel Watershed:

- **Commercial and Sport Fishing (COMM):** Uses of water for commercial or recreational collection of fish, shellfish, or other organisms, including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
- **Estuarine Habitat (EST):** Uses of water that support estuarine ecosystems, including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).
- **Marine Habitat (MAR):** Uses of water that support marine ecosystems, including, but not limited to, preservation or enhancement of marine habitats, vegetation (e.g., kelp), fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).
- **Wildlife Habitat (WILD):** Uses of water that support terrestrial ecosystems, including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- **Rare, Threatened, or Endangered Species (RARE):** Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under State or federal law as rare, threatened, or endangered.
- **Migration of Aquatic Organisms (MIGR):** Uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- **Spawning, Reproduction, and/or Early Development (SPWN):** Uses of water that support high-quality aquatic habitats suitable for reproduction and early development of fish.

The following potential beneficial uses were identified for the Dominguez Channel Watershed:

- **Municipal and Domestic Supply (MUN):** Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.
- **Navigation (NAV):** Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.
- **Warm Freshwater Habitat (WARM):** Uses of water that support warm-water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Wildlife Habitat (WILD):** See above.

Water bodies within the Los Angeles Harbor Watershed that are included on the 303(d) list of impaired water bodies include Cabrillo Beach (Outer), Los Angeles Harbor-Cabrillo Marina, Los Angeles Harbor-Consolidated Slip, Los Angeles Harbor-Inner Cabrillo Beach Area, LA/LB Harbors Inner Harbor, LA/LB Harbors Outer Harbor (inside breakwater), Machado Lake (Harbor Park Lake), Point Fermin Park Beach, and Wilmington Drain. Table 2.8.1 outlines the 303(d) pollutants with their respective pollutant category for the LA/LB Harbors Inner Harbor.

Table 2.8.1: 303(d) Pollutants for the Los Angeles/Long Beach Inner Harbor

Pollutant	Pollutant Category
Beach Closures	Pathogens
Benthic Community Effects	Miscellaneous
Benzo(a)pyrene (3,4-Benzopyrene-7-d)	Other Organics
Chrysene (C1-C4)	Other Organics
Copper	Metals/Metalloids
DDT (Dichlorodiphenyltrichloroethane)	Pesticides
PCBs (Polychlorinated biphenyls)	Other Organics
Sediment Toxicity	Toxicity
Zinc	Metals/Metalloids

Source: *Stormwater Data Report* (December 2018).

According to the *Natural Environment Study* (March 2018) prepared for the project, there are no drainage features potentially subject to the jurisdiction of the United States Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), or the LARWQCB.

2.8.3 Environmental Consequences

A discussion of the temporary and permanent impacts associated with the No Build Alternative and the Build Alternative is included below.

2.8.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Construction activities have the potential to affect the existing beneficial water resource values of the Dominguez Channel Watershed. Potential impacts to water quality could occur during construction of the proposed project due to increased erosion or accidental spills. However, Best Management Practices (BMPs), including erosion control measures, would be implemented during construction of the proposed project to reduce impacts to water quality and beneficial water resource values. Therefore, construction of the proposed project would not result in short-term adverse impacts to natural and beneficial floodplain values.

In addition, under the Construction General Permit, the Build Alternative would also be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) along with the construction BMPs aimed at reducing pollutants of concern in storm water runoff. The construction BMPs would include Erosion Control, Sediment Control, and Good Housekeeping BMPs designed to minimize erosion, retain sediment on site, and prevent spills. These actions are described in Project Feature PF-WQ-1 in Section 2.9.3.1. With the inclusion of this project feature, the temporary impacts to beneficial floodplain values would not be adverse.

No Build Alternative

The No Build Alternative would not result in the construction of any improvements within a floodplain. Therefore, the No Build Alternative would not result in temporary adverse impacts related to natural and beneficial floodplain values.

2.8.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

The proposed project would not result in changes to the hydrology of the Dominguez Channel Watershed or encroach on a 100-year floodplain; therefore, the Build Alternative would not result in a substantial encroachment in the 100-year floodplain.

No Build Alternative

The No Build Alternative would not result in the construction of any improvements that would result in changes to the hydrology of the Dominguez Channel Watershed

or associated floodplains. Therefore, the No Build Alternative would not result in permanent adverse impacts related to hydrology or floodplains.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would not result in any adverse impacts to hydrology or floodplains, no avoidance, minimization, and/or mitigation measures are required.

2.9 Water Quality and Storm Water Runoff

2.9.1 Regulatory Setting

2.9.1.1 Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[1] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a

[1] A point source is any discrete conveyance, such as a pipe or a man-made ditch.

general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards,[1] jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

2.9.1.2 State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more

[1] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

2.9.1.3 State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches,

human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water." The SWRCB has identified the Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans' MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Caltrans' MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

2. Caltrans must comply with the requirements of the Construction General Permit (see below);
3. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
4. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Caltrans' SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.9.2 Affected Environment

This section is based on the *Stormwater Data Report* (December 2018) and *Addendum to the Initial Site Assessment* (December 2018) prepared for the proposed project.

2.9.2.1 Surface Water

Regional and Local Hydrology

As previously described in Section 2.8, Hydrology and Floodplains, the proposed project is located within the Los Angeles Harbor Watershed.

The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction within the project area. Receiving waters for storm water within the project area include the LA/LB Harbors Inner Harbor, located approximately 0.3 mile (mi) east of the project site. Water from the project site flows to the Pacific Ocean (past the existing breakwater), located approximately 3.7 mi south of the Vincent Thomas Bridge viaduct.

Beneficial Uses

Refer to Section 2.8, Hydrology and Floodplains, for a list of the beneficial water resource values are identified in the LARWQCB's Water Quality Control Plan for the Los Angeles Region.

Water Quality Impairments Refer to Section 2.8, Hydrology and Floodplains, for a list of the water bodies within the Los Angeles Harbor Watershed that are included on the 303(d) list of impaired water bodies.

Per Caltrans' *Total Maximum Daily Load Status Review Report* (dated October 1, 2015), the Caltrans targeted pollutants for the Greater LA/LB Harbor Waters are: toxic pollutants, metals (copper, lead, and zinc), dichlorodiphenyltrichloroethane (DDT), polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs).

The Los Angeles Harbor bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) went into effect March 10, 2005. Caltrans is not a responsible party.

The Dominguez Channel and Greater LA/LB Harbor Waters Toxic Pollutants TMDL became effective on March 23, 2012. Targeted pollutants are copper, lead, zinc, PAH, DDT, PCBs, benzopyrene and dieldrin for water columns in the channel and harbors, and for sediments in the harbors. The TMDL requires facilities discharging to the Los Angeles River and San Gabriel River to monitor water quality at the mouth of each river. Caltrans will participate in groups of agencies to comply jointly with the TMDL. Project engineers will consider treatment controls for the proposed project and will consult with the District NPDES Storm Water Coordinator.

2.9.2.2 Groundwater

According to the *Addendum to the Initial Site Assessment* (December 2018), shallow groundwater is expected within the project area; groundwater was encountered between 4 ft and 11 ft below ground surface. Soil and/or groundwater contamination has been identified at properties in the vicinity of the maximum disturbance limits and parcels proposed for TCEs within the Build Alternative. Shallow groundwater is expected within the project area. However, according to the *Stormwater Data Report* (December 2018), there are no existing municipal or domestic water supply reservoirs or groundwater percolation facilities within the project area.

2.9.3 Environmental Consequences

2.9.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed and there would be an increased potential for soil erosion compared to existing conditions. During construction, the Build Alternative would disturb a total of 13.3 acres (ac) of surface area. Construction activities include grading; construction of new ramps; realignment of existing roads and ramps; and construction of new and modified on-site drainage ditches, berms, and swales, which would expose and disturb soil. Additionally, during a storm event, soil erosion could occur at an accelerated rate.

During construction, there is also the potential for construction-related pollutants to be spilled or leaked, or to be transported via storm runoff into drainages adjacent to the study area and into downstream receiving waters. Chemicals, liquid products,

petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via storm runoff into receiving waters.

Temporary or portable sanitary facilities provided for construction workers would be a source of sanitary waste that could be transported to downstream receiving waters. Construction workers would also generate trash and debris (e.g., food wrappers) that could also be transported to receiving waters. If water is detained at the construction site, it has the potential to reach ambient air temperatures and, if discharged to receiving waters, could contribute to the increase in water temperatures. Overall, the Build Alternative is anticipated to be Risk Level 2.

As described in the following project feature (PF-WQ-1), construction activities associated with the Build Alternative would comply with the requirements of the Construction General Permit (CGP). In compliance with the CGP, preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of construction Best Management Practices (BMPs) would be required to reduce water quality impacts. The SWPPP would include temporary erosion and sediment control measures to reduce sedimentation and turbidity of surface runoff from disturbed areas, personnel training, scheduling and implementation of BMPs during construction and for the various seasons, identification of NonStorm Water Management BMPs, and monitoring during construction. The SWPPP would also include provisions for Tracking Control BMPs, Wind Erosion Control BMPs and Waste Management and Material Pollution Control BMPs.

PF-WQ-1 Prior to commencement of construction activities, the City of Los Angeles Harbor Department (LAHD) will obtain coverage for the Build Alternative under the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]) Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006- DWQ, NPDES No. CAS000002, or any other subsequent permit. This will include submission of Permit Registration Documents, including a Notice of Intent for coverage under the permit to the SWRCB via the Storm Water Multiple Application and Report Tracking System (SMARTS). Construction activities will not commence until a Waste Discharge Identification

Number is obtained from SMARTS. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) to ensure that the potential for soil erosion, sedimentation, and spills is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction activities and stabilization of the site, a Notice of Termination will be implemented via SMARTS.

Properly designed BMPs with appropriate implementation and maintenance, as incorporated by Project Feature PF-WQ-1, would reduce water quality impacts. Therefore, no adverse water quality impacts are anticipated during construction of the Build Alternative.

As described in Section 2.9.2, there is potential for groundwater to exist at 11 ft or less below ground surface within the project area. Therefore, groundwater dewatering may be necessary during construction. Two parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines. Groundwater may contain elevated levels of total dissolved solids, nitrates, color, or other constituents that could affect surface water quality when discharged to surface waters. However, as specified in PF-HAZ-3 (Section 2.12.3.1), supplemental site investigations will be performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment. If contamination is identified, a remediation plan will be prepared, implemented, and completed prior to right-of-way certification. Additionally, as specified in Project Feature PF-WQ-2, if groundwater dewatering becomes necessary during construction, construction activities associated with the Build Alternative would comply with the requirements of Order No. R4-2013-0095 (NPDES No. CAG994004), Order No. R-4-2013-0043 (NPDES No. CAG914001), Order No. R4-2013-0042 (NPDES No. CA834001), depending on the nature of the groundwater being discharged to surface waters within the coastal

watersheds of Los Angeles and Ventura counties. Order No. R4-2013-0095 (NPDES No. CAG994004) covers general discharges of groundwater from construction and project dewatering, whereas Order No. R-4-2013-0043 (NPDES No. CAG914001) covers discharges of treated groundwater from investigation and/or cleanup of volatile organic compound (VOC) contaminated sites. Order No. R4-2013-0042 (NPDES No. CA834001) covers discharges of treated groundwater from investigation and/or cleanup of petroleum fuel-contaminated sites. Under these orders, permittees are required to monitor their discharges of groundwater extraction waste from construction to ensure that effluent limitations for constituents are not exceeded.

PF-WQ-2 If dewatering is required, construction site dewatering will comply with one of three orders, or any subsequent orders that apply to groundwater discharges to surface waters within the coastal watersheds of Los Angeles and Ventura counties, depending on the nature of the groundwater. Order No. R4-2013-0095 (NPDES No. CAG994004) covers general discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Los Angeles and Ventura counties. This order will be applicable to the proposed project if it can be demonstrated that the groundwater being discharged to surface waters does not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable State or federal water quality objectives/criteria, or cause acute or chronic toxicity in the receiving water. However, if groundwater in the study area is found to contain volatile organic compounds (VOCs), the proposed project will be subject to Order No. R-4-2013-0043 (NPDES No. CAG914001). Order No. R-4-2013-0043 covers discharges of treated groundwater from investigation and/or cleanup of VOC-contaminated sites to surface waters within the coastal watersheds of Los Angeles and Ventura counties. However, if groundwater in the study area is found to contain petroleum fuel-contaminated sites, the proposed project will be subject to Order No. R-4-2013-0043 (NPDES No. CAG914001). Order No. R4-2013-0042 (NPDES No. CA834001) covers discharges of treated groundwater from investigation and/or cleanup of petroleum fuel-contaminated sites to surface waters within the coastal watersheds of Los Angeles and Ventura counties. Under these orders, permittees are required to monitor their discharges of groundwater extraction

waste from construction to ensure that effluent limitations for constituents are not exceeded.

No Build Alternative

The No Build Alternative would not include the construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in short-term water quality impacts from construction-related activities.

2.9.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

Pollutants of concern during operation of the Build Alternative include suspended solids/sediments, nutrients, pesticides, heavy metals, oil and grease, toxic organic compounds, and trash and debris. These pollutants of concern are typically generated during the operation of a transportation facility. The Build Alternative would result in a permanent increase in impervious surface area of 2.2 ac, for a total of 20.7 ac of impervious surface area. An increase in impervious surface area would increase the volume of runoff during a storm, thereby increasing the potential for more pollutants to be transported to receiving waters. Also, an increase in impervious surface area would increase the total amount of pollutants in both storm water and nonstorm water runoff, which would increase the amount of pollutants traveling to on-site drainages and downstream receiving waters.

Operation of the Build Alternative has the potential to contribute to the downstream nutrient load, sedimentation/siltation, and metals, copper, and toxicity impairments. Treatment BMPs would be implemented under the Build Alternative to target these pollutants of concern. As a result, the Build Alternative would not be a substantial source of pollutants that would contribute to any existing impairments. Therefore, there is a low potential for the Build Alternative to adversely affect water quality. The Build Alternative would increase the existing amount of impervious surface area in the project area by 2.2 ac.

No existing Treatment BMPs are located in the project area. As specified in Project Features PF-WQ-3, PF-WQ-4, and PF-WQ-5, the Build Alternative would comply with the Caltrans NPDES Permit and would implement Caltrans-approved Treatment and Design Pollution Prevention BMPs to reduce the discharge of pollutants of concern to the maximum extent practicable. Design Pollution Prevention BMPs are features that focus on reducing or eliminating runoff and controlling sources of

pollutants during operation of the proposed project. Treatment BMPs utilize treatment mechanisms to remove pollutants that have entered storm water runoff.

PF-WQ-3 The City of Los Angeles Harbor Department (LAHD) will ensure that the Build Alternative complies with the provisions of the NPDES Permit, Statewide Storm Water Permit, WDRs for the State of California, Department of Transportation (Caltrans) Order No. 2012-0011-DWQ, as amended by WQ 2014-0077-DWQ, NPDES No. CAS000003 (Caltrans Permit), or any subsequent permit.

PF-WQ-4 Caltrans-approved Design Pollution Prevention BMPs will be implemented to the maximum extent practicable (MEP) consistent with the requirements of the Caltrans Permit. Design Pollution Prevention BMPs include preservation of existing vegetation and revegetation or replacement planting of disturbed soil areas; surface water collection within Caltrans right-of-way; rip-rap, flared end sections, lining of ditches and swales, and other devices; benches, rounded slopes, and other related measures; and retaining walls.

PF-WQ-5 Caltrans-approved Treatment BMPs will be implemented to the MEP consistent with the requirements of the Caltrans Permit. Treatment BMPs may include biofiltration swales, biofiltration strips, and infiltration devices, detention devices, and Austin Sand Filters. The results of the geotechnical investigation will determine the final Treatment BMPs.

The proposed Treatment BMPs for the Build Alternative include biofiltration swales and strips. Biofiltration swales are vegetated channels that convey storm water. Both biofiltration strips and swales remove pollutants by filtration through grass, sedimentation, adsorption to soil particles, and infiltration through soil. Biofiltration strips and swales are effective at removing debris and solid particles, and provide some removal of dissolved constituents. Detention basins would capture and retain runoff temporarily, decreasing the volume and velocity of runoff before releasing it to receiving waters. An infiltration device would remove pollutants from surface discharges by capturing a portion of the water quality volume and infiltrating it directly to the soil rather than discharging it to surface waters. An Austin Sand Filter collects storm water, which is directed into a chamber where large sediments and

particulates settle out and then into a second chamber to be filtered through a media that removes coarse and fine sediments and particulate metals.

As stated above, the proposed Treatment BMPs would target constituents of concern from transportation facilities. Furthermore, the Design Pollution Prevention BMPs would control sources of pollutants in the study area, thereby reducing the amount of pollutants that would drain to downstream receiving waters. Therefore, the Build Alternative would not result in any adverse impacts to water quality during operation with inclusion of Project Features PF-WQ-3, PF-WQ-4, and PF-WQ-5.

No Build Alternative

Under the No Build Alternative, the State Route 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange improvements would not be constructed. Therefore, under the No Build Alternative, there would not be an increase in impervious area or a change in land use in the study area. The No Build Alternative would not result in an increase in storm water runoff or pollutant loading.

2.9.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project features outlined above in Sections 2.9.3.1 and 2.9.3.2, no adverse impacts to water quality would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

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2.10 Geology/Soils/Seismic/Topography

2.10.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using Caltrans' Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Caltrans' Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

2.10.2 Affected Environment

This section discusses the existing geologic and soils conditions within the project area and provides an analysis of the potential impacts of the proposed project that are related to geology and soils. This section also addresses the potential for structural damage to project facilities due to the local geology underlying the project site, as well as slope stability, ground settlement, soils, grading, and seismic conditions. This section summarizes information provided in *Appendix D Preliminary Geotechnical Memorandum* of the *Advance Planning Study Design Memo* (2016) and the *Draft Project Report* (December 2018).

2.10.2.1 Local Geology, Topography, and Soils

The State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange is in the southern portion of the City of Los Angeles (City), within the Los Angeles Basin near the eastern edge of the Palos Verdes Peninsula. The Palos Verdes Peninsula is an isolated upland area projecting into the ocean at the southwest border of the Los Angeles Basin, and is actively rising due to tectonic compressional forces and uplift along the oblique-slip Palos Verdes fault. The topography in this region is varied, with flat areas to the north and east adjacent to the Port of Los Angeles and rolling hills, sea cliffs, and shorelines to the west and south. The ground surface surrounding the project area is approximately 25 to 45 feet (ft) in elevation.

The near-surface deposits beneath the site are mapped as artificial fill (af) on beach sediments (Qs). Beach sediments range from sand to cobble-boulder gravel. Underlying these upper soils is the mid-Pleistocene-aged marine San Pedro Sand. The San Pedro Sand is a light gray to reddish-brown sand-and-pebble gravel. The area surrounding the site is generally underlain by alluvium consisting of fine-grained silty sand (SM), poorly graded sand (SP), and poorly graded sand with silt (SP-SM) to the maximum depth explored of 60 ft below ground surface (bgs). Occasionally, layers of silt (ML), sandy clay (CL), and clayey sand (SC) were encountered in the upper 10 ft. Approximately 0.5 mile (mi) southwest of the project site, bedrock was encountered at approximately 15 ft bgs. The alluvium is underlain by moderately soft to very hard siltstone. Claystone was encountered below the siltstone at most exploratory locations.

Groundwater

According to the *Addendum to the Initial Site Assessment* (June 2018), shallow groundwater is expected within the project area; groundwater was encountered between 4 and 11 feet below ground surface (bgs) within one parcel proposed for partial acquisition.

2.10.2.2 Geologic Hazards

Geologic hazards relevant to the proposed project include tsunamis, landslides/rock falls, seismic ground shaking, liquefaction, hazardous soils, seismic settlement, and subsidence. The following geologic hazards are not relevant to the proposed project and are therefore not discussed further in this section:

- **Volcanic Hazards:** There are no active, potentially active, or inactive volcanoes in Los Angeles County. Therefore, volcanic hazards would not affect the project area.

- **Economic Resources/Mineral Hazards:** According to California's Division of Oil, Gas, and Geothermal Resources, there are six oil and gas wells in the community of San Pedro. All of the wells are inactive except for one that is idle. The idle well is not in proximity to the project area and would therefore have no effect.

  The State Geologist is responsible for classifying and/or designating mineral deposits based on adopted criteria that address the resource development potential of a particular commodity. Areas are categorized into four mineral resource zones (MRZs) based on geologic factors. MRZ-2 identifies significant mineral deposits of a particular commodity and is therefore the most important category. There are

no deposits in the project area or in the community of San Pedro that have been classified as MRZ-2 by the State Geologist.

Faulting and Seismicity

The project area is characterized by several active faults that are capable of generating strong ground motions at the project site. The most significant seismic source for the project site is the Palos Verdes fault, which is inferred to be located in the subsurface about 2,200 to 2,800 ft northeast of the site. The Palos Verdes fault forms the abrupt northern front of the Palos Verdes Hills. The onshore portion of the fault has a mapped length of about 9 mi. In addition, the fault has been mapped northward under Santa Monica Bay and offshore to the south to where it bifurcates around the Lausen sea knoll, which is located offshore of San Clemente. From Santa Monica Bay to the Lausen sea knoll, the total length of the Palos Verdes Fault Zone is estimated to be approximately 71 mi. Other significant faults in the vicinity of the project site include the THUMS Huntington Beach fault, the Compton fault, and the Cabrillo fault. Local fault data are summarized in Table 2.10.1.

Table 2.10.1: Local Fault Data

Fault	Fault Type	Maximum Earthquake Magnitude	Estimated Closest Distance R_{RUP} (km)
Palos Verdes	Strike-Slip	7.2	0.8
Cabrillo (onshore section)	Normal	6.7	2.5
Compton	Reverse	6.9	6.4
THUMS-Huntington Beach (southern section)	Strike-Slip	6.6	3.2
Cabrillo (offshore section)	Strike-Slip	7.5	5.0

Source: *Advance Planning Study Design Memo* (November 2016)
km = kilometer(s) R_{RUP} = rupture distance

Fault Rupture Potential

Like most of southern California, the project site is located in a seismically active area. However, no active faults have been mapped through or within 1,000 ft of the project site. Furthermore, the project site is not within an Alquist-Priolo Earthquake Fault Zone as defined by the State of California.

Liquefaction

Liquefaction is a phenomenon in which loose, saturated soils behave similarly to fluid when subjected to high-intensity ground shaking. Primary factors influencing liquefaction potential include groundwater elevation, soil type and grain size distribution, relative density of soil, initial confining pressure, and intensity and duration of ground shaking. Soils most susceptible to liquefaction are clean loose,

uniformly graded, fine-grained sands and nonplastic silts that are saturated. Silty sands have also been proven susceptible to liquefaction. In addition, soils most susceptible to liquefaction are saturated low-density sands and silts within 50 ft of the ground surface.

As discussed above, the historic high groundwater at the project site was reported to be 10 ft bgs and the soils in the vicinity of the project site are granular. Therefore, there is potential for liquefaction.

Landslides

According to the City's General Plan Safety Element, the project site is within an area with a cluster of small, shallow surficial landslides.[1]

Seismic Settlement

As discussed above, the project area is generally underlain by alluvium that could be subject to differential settlement caused by the intense shaking associated with seismic events.

Soil Subsidence

Subsidence is a phenomenon where the soils and other earth materials settle or compress, resulting in a lower ground surface elevation. When fill and native materials on a site are saturated with water, there is a net decrease in the pore pressure, and contained water would allow the soil grains to pack closer together. This closer grain packing results in less volume and lowering of the ground surface. Subsidence was first observed in the Los Angeles/Long Beach Harbors area in 1928. Most of the subsidence was the result of oil and gas production from the Wilmington Oil Field, which was discovered in 1936. Subsidence in the area has been mitigated through water injection; however, in the absence of proper engineering, proposed structures could be cracked and warped as a result of saturated, unconsolidated/compressible sediments.[2]

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1 City of Los Angeles. 1996. Safety Element of the Los Angeles City General Plan. Exhibit C: Landslide Inventory and Hillside Areas.

2 Los Angeles Harbor Department. 2008. *Draft San Pedro Waterfront Project Draft Environmental Impact Statement/Environmental Impact Report.* Section 3.5, Geology. (Website: https://www.portoflosangeles.org/EIR/SPWaterfront/DEIR/3-5_Geology.pdf).

2.10.2.3 Soil Hazards

Contaminated Soils

As described in detail in Section 2.12, Hazardous Waste/Materials, aerially deposited lead (ADL) is generally encountered in unpaved (or formerly unpaved) areas adjacent to older roads, primarily as a result of lead deposition from historical vehicle emissions. Because parts of SR-47 were constructed prior to 1963 and have been heavily traveled, the potential for lead contamination to exist within exposed soils along the route due to ADL is likely to remain. As provided in the *Draft Project Report* (May 2018), lead in soil along SR-47 and its interchange ramps to certain depths can be expected and was evident in investigations previously conducted nearby on SR-47/Interstate (I) 110.

Additionally, as stated in Section 2.12, Hazardous Waste/Materials, soil and/or groundwater contamination has been identified at properties in the vicinity of the maximum disturbance limits and parcels proposed for TCEs within the Build Alternative. Shallow groundwater is expected within the project area.

Corrosive Soils

Corrosive soils contain constituents or physical characteristics that react with concrete (water-soluble sulfates) or ferrous metals (chlorides, low pH levels, and low electrical resistivity). Fine-grained soils (predominantly clays) are the typical soil types responsible for corrosive site conditions. Corrosion testing would be performed during final design on samples collected from the proposed borings to evaluate corrosion potential in accordance with the current Caltrans corrosion guidelines.

2.10.3 Environmental Consequences

2.10.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Soil Erosion

Construction of the Build Alternative would temporarily disturb soil. Excavated soil in the construction areas would be exposed, resulting in an increased potential for soil erosion during construction compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate.

As described in Project Feature PF-WQ-1, during all construction activities, the construction contractor would be required to adhere to the requirements of the Construction General Permit and to implement Erosion and Sediment Control Best Management Practices (BMPs) specifically identified in the proposed project Storm

Water Pollution Prevention Plan (SWPPP) to keep sediment from moving off site into receiving waters and impacting water quality. Refer to Section 2.9, Water Quality and Storm Water Runoff, for additional discussion regarding construction-related water quality issues and minimization, including BMPs.

Worker safety hazards resulting from erosion during construction of the Build Alternative would be minimized based on implementation of the requirements in the General Construction Permit and Erosion and Sediment Control BMPs in the SWPPP.

Ground Motion

Construction activities could be affected by ground motion from seismic activities. Possible ground rupture, liquefaction, and slumping or slope failure could occur in areas with artificial fill if an earthquake were to occur during construction. Implementation of safe construction practices and compliance with California Department of Transportation (Caltrans) and California Division of Occupational Safety and Health (Cal-OSHA) safety requirements would minimize the impacts to worker safety during construction activities.

Hazardous Waste

Disturbance of unpaved areas adjacent to the SR-47 mainline and ramps and to arterial streets within the project disturbance footprint could disturb ADL and pesticides in the soils, if present. Refer to Section 2.12, Hazardous Waste/Materials, for a discussion of the potential effects associated with disturbance of soils containing ADL and pesticides during construction of the Build Alternative and the project features addressing those potential effects.

Additionally, as described in Section 2.12, Hazardous Waste/Materials, the Build Alternative could disturb potentially contaminated soil and/or groundwater originating at properties outside the maximum disturbance limits and the boundaries of property. Shallow groundwater is expected within the project area. Three parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines or past railroad activities. However, Project Feature PF-HAZ-3 allows for site investigations and potentially more extensive subsurface investigations to be performed at these sites in order to determine the extent of potential contamination.

No Build Alternative

Under the No Build Alternative, the temporary construction-related impacts discussed above for the Build Alternative would not occur because there would be no construction of project improvements on SR-47.

2.10.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

Local Geology, Topography, and Soils

The Build Alternative would not result in permanent substantial changes to the topography in the project area because the improvements would generally be constructed at or close to the same grade as the existing facility.

Design and construction of the proposed improvements would adhere to the Caltrans *Highway Design Manual* (HDM) (Caltrans 2016) and other required standards, as well as to recommendations from the Foundation Report and the Geotechnical Design Report, as included in Measure GEO-1.

Adherence to recommendations within these reports would substantially reduce the geologic risks of the proposed project. In addition, surficial soils that are sandy can be susceptible to soil erosion produced by running water and accelerated erosion on steep slopes. The clayey surficial soils are expected to expand when wet and to crack upon drying. Cracking allows infiltration of water from storms and irrigation, ultimately causing loosening of the surficial soils. This results in increased soil erodibility. Revegetation of graded slopes, as specified in Project Feature PF-GEO-2, would be performed following construction to minimize the soil erodibility.

PF-GEO-2 **Revegetation.** Following completion of construction, revegetation of graded slopes (with native and/or drought resistant plants] will be performed to minimize erosion. Runoff will be diverted from each slope face using earthen berms and/or concrete swales at the top of each slope.

Additionally, Section 2.9, Water Quality and Storm Water Runoff, contains additional project features related to soil erosion, including BMPs. Section 2.12, Hazardous Waste/Materials, contains additional project features related to hazardous wastes and materials.

Faulting and Seismicity

As described above, the project area is characterized by several active faults that are capable of generating strong ground motions. Therefore, the project site could be subject to adverse impacts related to seismic ground shaking. However, the project site is not located in an Alquist-Priolo Fault Zone, and no active faults have been mapped through or within 1,000 ft of the project site. Therefore, in accordance with Caltrans Memo to Designers 20-10 (January 2013), surface fault rupture is not considered a potential hazard and further study of fault rupture hazard is not necessary. As such, no special precautions or restrictions during project operation related to fault-induced ground rupture are required, but the proposed project would be built to current seismic design standards.

Liquefaction

As discussed above, there is potential for liquefaction at the project site. Therefore, as described in Measure GEO-1, a more detailed evaluation of liquefaction potential at the site would be performed during the plans, specifications, and estimates (PS&E) phase. Findings and recommendations would be incorporated in the final design of the Build Alternative.

Seismic Slope Stability

As described above, according to the City's General Plan Safety Element, the project site is within an area with a cluster of small, shallow surficial landslides. Measure GEO-1 would require a slope stability analysis to be performed for the embankments in the final design Foundation Report.

Additionally, proposed embankment slopes should meet the required minimum for the factor of safety considering static and pseudo-static conditions. Embankment slopes constructed at a gradient of 2:1 (H:V) or flatter are considered to be grossly stable. This would be further evaluated using data from proposed borings and the results of the slope stability analysis of the embankments during final design. Since the embankments are anticipated to be up to 36 ft tall, preloading and a waiting period would have to be considered in the final design. If loose or soft soils are encountered during the exploration, ground improvement may be necessary to minimize settlement or improve stability of the tall embankments.

Tsunamis and Seiches

Because the project site is located near the Los Angeles Harbor, there is potential that a seismic event could result in a seiche and tsunami. However, because of the nature

of the proposed project (interchange and roadway improvements), it is anticipated that, in the event of a seiche/tsunami, damage to the project site would not be adverse as no permanent buildings are located on site. No special precautions or restrictions during project design and operation of the Build Alternative are required.

Contaminated Soils

As described above and in detail in Section 2.12, Hazardous Waste/Materials, lead in soils along SR-47 and its interchange ramps to certain depths can be expected and are evident in investigations previously conducted nearby on SR-47 and I-110. Soils determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. Project Feature PF-HAZ-1 specifically requires the ADL studies to be conducted along the SR-47 right-of-way to determine whether or not contamination exists in association with ADL.

Additionally, as described above and in detail in Section 2.12, Hazardous Waste/Materials, three parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines or past railroad activities. However, Project Feature PF-HAZ-3 allows for site investigations and potentially more extensive subsurface investigations to be performed at these sites in order to determine the extent of potential contamination

Corrosive Soils

Corrosive soils contain constituents or physical characteristics that react with concrete (water-soluble sulfates) or ferrous metals (chlorides, low pH levels, and low electrical resistivity). Fine-grained soils (predominantly clays) are the typical soil types responsible for corrosive site conditions. As described in Measure GEO-1, corrosion testing would be performed during PS&E on samples collected from the proposed borings to evaluate corrosion potential in accordance with the current Caltrans corrosion guidelines.

No Build Alternative

Under the No Build Alternative, the permanent impacts discussed above for the Build Alternative would not occur because none of the permanent SR-47 improvements provided in the Build Alternative would be implemented and operated.

2.10.4 Avoidance, Minimization, and/or Mitigation Measures

Along with the project feature identified in Section 2.10.3.2, Measure GEO-1 would avoid and/or minimize potential project effects related to geology, soils, and seismicity.

GEO-1 **Geotechnical Investigation.** During the plans, specifications, and estimates (PS&E) phase, qualified geotechnical personnel will conduct a detailed geotechnical investigation to assess the geotechnical conditions at the project area. The geotechnical investigation will include exploratory borings to investigate site-specific soils and conditions and to collect samples of subsurface soils for laboratory testing. Those soil samples will be tested to evaluate liquefaction potential, collapsibility potential, stability, expansive properties, and corrosion potential. The proposed project-specific findings and recommendations of the geotechnical investigation will be summarized in a Foundation Report and a Geotechnical Design Report to be submitted to the California Department of Transportation (Caltrans) for review and approval. Those findings and recommendations will be incorporated in the final design of the Build Alternative.

2.11 Paleontology

2.11.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized project.

23 United States Code (USC) 1.9(a) requires that the use of federal-aid funds must be in conformity with all federal and state laws.

23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

2.11.2 Affected Environment

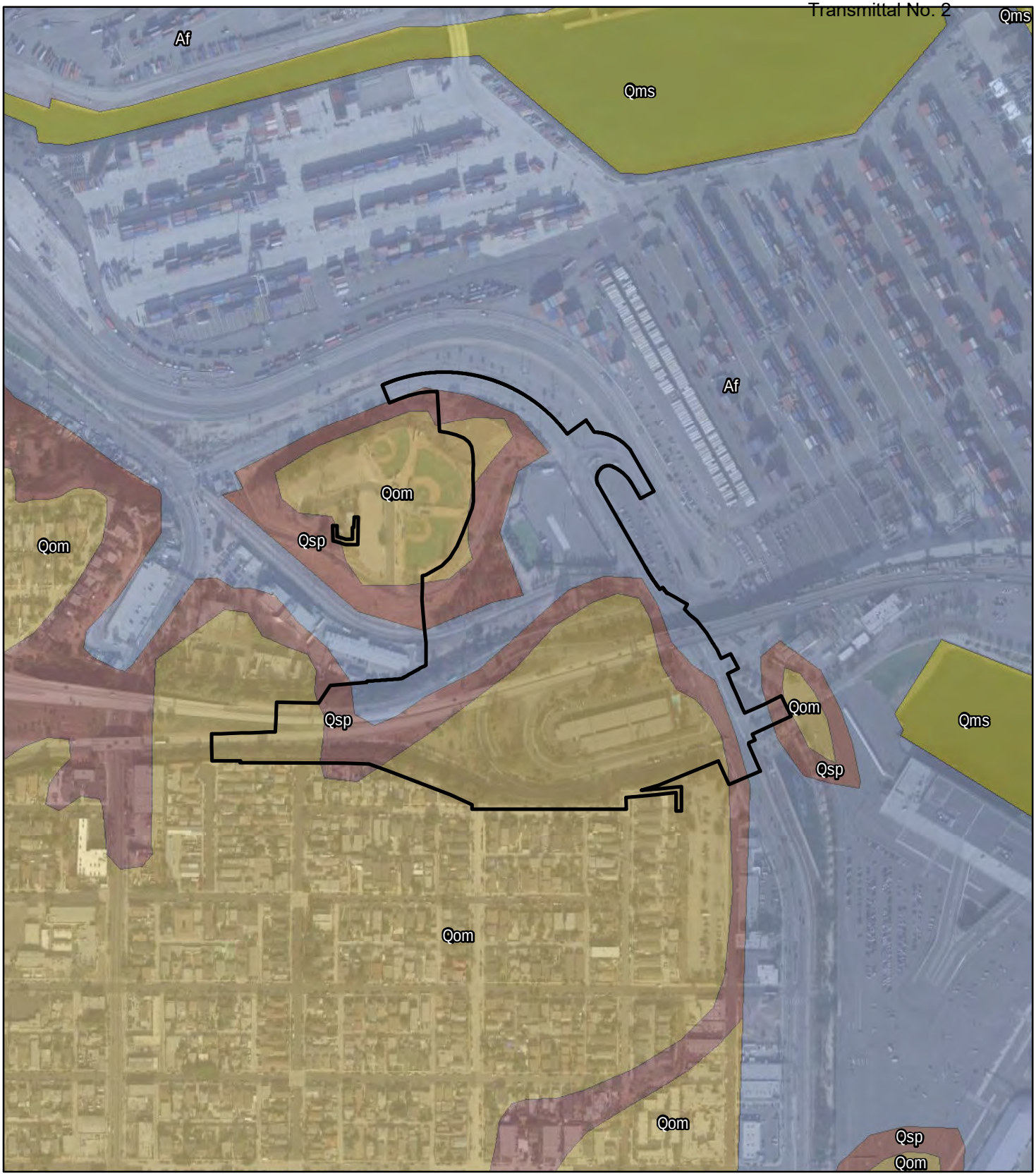
This section is based on the *Paleontological Identification Report and Paleontological Evaluation Report* (February 2018).

A paleontological resource locality search for any known localities within and surrounding the study area was completed through the Natural History Museum of Los Angeles County (LACM) in December 2017. Relevant geologic maps and geological and paleontological literature were reviewed. A pedestrian survey of the study area was conducted on January 22, 2018.

The study area is within the Peninsular Ranges Geomorphic Province, a large structural block that extends from the Transverse Ranges in the north to the tip of Baja California. Within this larger region, the proposed project is located in the Los Angeles Basin, which is a broad alluvial plain bounded by mountains to the north and east and the Pacific Ocean to the west and south.

Geologic mapping indicates the entire study area contains artificial fill, Old Shallow Marine Deposits on Wave-Cut Surface, and the San Pedro Formation, Undivided (Figure 2.11-1). Because of its disturbed context, artificial fill does not have the potential to contain scientifically significant paleontological resources. The

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LEGEND

- Project Location
- Af - Artificial fill
- Qms - Unconsolidated Shelf Sediment
- Qom - Old Shallow Marine Deposits on Wave-Cut Surface
- Qsp - San Pedro Formation, Undivided

N

0 250 500
FEET

SOURCE: Saucedo, Green, Kennedy, and Bezore, 2016

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FIGURE 2.11-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project

Geologic Map

07-LA-47 PM 0.3/0.8

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Old Shallow Marine Deposits on Wave-Cut Surface are late to middle Pleistocene in age (11,700–781,000 years ago) and have the potential to preserve both marine and terrestrial animals and plants because they accumulated in nearshore environments. These deposits have produced a variety of fossils of reptiles, birds, mammals, sharks, rays, and bony fish and are considered to have high paleontological sensitivity. The San Pedro Formation, Undivided, is early Pleistocene in age (781,000–2.588 million years ago) and consist mostly of marine deposits that have yielded diverse marine fauna such as sharks, rays, and bony fish. The San Pedro Formation, Undivided, is also considered to have high paleontological sensitivity.

The results of the locality search through the LACM indicated that the study area contains terrestrial older Quaternary Alluvium also known as the Palos Verdes Sand (i.e., Old Shallow Marine Deposits on Wave-Cute Surface) overlying marine older Quaternary San Pedro Sand (i.e., San Pedro Formation, Undivided). According to the fossil locality search conducted through the LACM, there are no known fossil localities within the boundaries of the project area. However, the museum has records of fossil localities near the project area from the same or similar deposits as those mapped within the project area.

The closest fossil locality southeast of the project area is LACM 187, located east of Harbor Boulevard and south of the Vincent Thomas Bridge. This locality produced specimens of rattlesnake (*Crotalus*) and ground sloth (*Megalonyx*). Very near that locality, LACM 1026 produced a specimen of duck (*Chendytes lawi*). Farther to the south, on the east side of Harbor Boulevard and south of O'Farrell Street, LACM 1057 yielded a mixed marine and terrestrial fauna. Slightly farther south, at the intersection of Harbor Boulevard and First Street, LACM 3248 produced a specimen of fossil horse (*Equus*), and near the intersection of Harbor Boulevard and Second Street, LACM 1058 produced specimens of eagle ray (*Myliobatis californicus*), puffin (Alcidae), quail (*Lophortyx*), and rabbit (*Sylvilagus*). To the southwest of the project area, the closest fossil locality in the San Pedro Formation, Undivided, is LACM 3658, which is located just outside the western end of the project area. This locality was discovered during construction of the Vincent Thomas Bridge, and it yielded a substantial quantity of marine vertebrates, including several types of shark (e.g., *Carcharhinus, Galeorhinus zyopterus, Triakis semifasciata*), stingray (*Dasyatis dipterurus*), skate (*Raja*), and other vertebrates. LACM 186, which lies immediately south of LACM 3658 and the Vincent Thomas Bridge, produced specimens of pond turtle (*Emys*) and puffin (*Puffinus griseus*), among other animals. Lastly, LACM 3254 yielded a marine fauna of sharks, rays, and a wide variety of

bony fish, similar to that of locality LACM 3658, as well as terrestrial animals, such as toad (*Bufo*) and rabbit. LACM 3254 is adjacent to LACM 186.

The pedestrian survey found that much of the study area is paved, developed, and landscaped for the existing freeway, roads, and on- and off-ramps, as well as recreational and residential uses. However, some observed sediments within the study area consisted of yellowish-brown sand consistent with the Old Shallow Marine Deposits on Wave-Cut Surface. This sediment sometimes contained scattered and highly fragmented fossil shell belonging to a variety of shallow marine species, including Venus clam (*Chione*), oyster (*Ostrea lurida*), scallop (*Argopecten*), tellin (Tellinidae), and moon snail (*Polinices* or *Neverita*). Also, at the top of the steep southern hillside along the eastbound State Route (SR) 47 off-ramp, a small, rounded mudstone rock measuring approximately 6 inches wide, 8 inches long, and 4 inches high contained evidence of boring clams, with some fossil clams still inside the holes.

2.11.3 Environmental Consequences

2.11.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

The construction of the Build Alternative would not result in temporary impacts to paleontological resources because any impacts to those types of resources during construction would be considered permanent, as described later in Section 2.11.3.2.

No Build Alternative

Under the No Build Alternative, none of the proposed improvements to SR-47 would be constructed. The No Build Alternative would maintain the existing conditions; therefore, the No Build Alternative would not result in temporary impacts related to paleontological resources as a result of construction activities.

2.11.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

The construction of the Build Alternative would require ground disturbance, excavation, and modifications to existing highway and local street facilities and structures. Therefore, the Build Alternative would result in potential impacts to paleontological resources.

Current project plans indicate that the main area of excavation for the proposed project would be on the hill at the northern end of the project area for the realignment of Knoll Drive. This hill is 50 ft in height and would be cut back by approximately 50 ft. In addition, cuts would be made to the existing 30 ft tall slope on the eastbound

SR-47 off-ramp. Excavation to depths of approximately 4 to 8 ft would be required along the new ramps for surface drainage. Some utility relocation, primarily along Front Street, would be required and would involve excavation to depths of approximately 3 to 10 ft, depending on the specific area and utility concerned. Cleaning up aerially deposited lead adjacent to roadways throughout the project area is expected to entail excavation to depths of 1 to 3 ft. Excavation depths for retaining walls and noise barriers would depend on the location and final design.

The Build Alternative has the potential to affect paleontological resources in the coastal zone. However, construction activities would conform to goals, objectives, and policies within the San Pedro Local Coastal Program Specific Plan regarding the protection of natural resources. Also, since the proposed project is located within the coastal zone, a permit will need to be obtained from the Port of Los Angeles once the environmental document has been approved and certified.

As such, development of the Build Alternative has the potential to impact scientifically significant, nonrenewable paleontological resources. As described in Measure PAL-1, a Paleontological Mitigation Plan (PMP) would be developed concurrently with the final design plans.

No Build Alternative

Under the No Build Alternative, none of the proposed improvements to SR-47 would be constructed. The No Build Alternative would maintain the existing conditions; therefore, it would not result in permanent adverse impacts related to paleontological resources.

2.11.4 Avoidance, Minimization, and/or Mitigation Measures

With implementation of Measure PAL-1, no adverse impacts related to paleontology would occur.

PAL-1 **Paleontological Mitigation Plan.** A qualified paleontologist will prepare a Paleontological Mitigation Plan (PMP) following the guidelines in the California Department of Transportation (Caltrans) Standard Environmental Reference (SER), Environmental Handbook, Volume 1, Chapter 8 – Paleontology (June 2016 or more current) and guidelines developed by the Society of Vertebrate Paleontology (SVP 2010). The PMP will be prepared concurrently with final design plans during the plans, specifications, and estimates (PS&E) phase.

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2.12 Hazardous Waste/Materials

2.12.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (CERCLA), and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as "Superfund," is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22

Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

2.12.2 Affected Environment

This section is based on the *Initial Site Assessment* (ISA) (February 2017) and the *Addendum to the Initial Site Assessment* (December 2018).

2.12.2.1 Field Survey and Record Search Methodology

The following were conducted as part of the ISA:

- **Reconnaissance-Level Site Visit:** A reconnaissance-level site visit was conducted in September 2016. The site visit concluded that no underground or surface storage tanks, sumps, drums, ponds, basins, or landfills were observed within the project area. However, power lines were observed along Front Street and along existing railroad rights-of-way (ROWs). Additionally, pipeline markers and monitoring wells were observed on the Cruise Terminal Parcel (Assessor's Parcel Number [APN] 7440-024-911) from vantage points along Front Street and Harbor Boulevard. The site visit did not note any surface soil staining, odors, oil sheen, or vegetation damage. However, some illegal dumping of household-type trash was observed along the existing railroad ROW and near the Vincent Thomas Bridge. Paint markings occur on streets and bridges as well.
- **Environmental Database and Agency Records Review:** The databases reviewed online included the California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System (SWIS); the California Department of Toxic Substance Control's (DTSC) ENVIROSTOR database; and the State Water Resources Control Board's (SWRCB) GeoTracker database. These databases were searched to obtain documentation for properties within and adjacent to the existing and proposed ROW for the Build Alternative. Further, the environmental database firm Environmental Data Resources, Inc. (EDR), based in Shelton, Connecticut, was subcontracted to conduct a search for facilities listed by regulatory agencies as potentially having environmental concerns. A full list of databases consulted appears in the ISA.

- **Historical Research:** Historical aerial photographs, fire insurance maps, historical topographic maps, and oil and gas maps of State Route (SR) 47 within the project area were reviewed.

Based on the site visit, several hazardous materials were identified as potentially of concern within the existing SR-47 ROW near the project area and within the disturbance limits of the Build Alternative. Those types of hazardous materials are described below.

2.12.2.2 Results

Proposed Acquisition Parcels and Temporary Construction Easements

Based on the field survey, historical research, and database search discussed above, one "medium-risk" parcel within the project area that would be partially acquired was identified as having hazardous waste concerns. Refer to Table 2.12.1 below for more detailed information regarding the types of hazardous waste concern at the parcel. Figure 2.12-1 shows the location of this parcel within the project area.

- **Pacific Harbor Rail Line (7448-035-927):** Based on the results of the reconnaissance-level visit and available information, this parcel is suspected to contain hazardous materials associated with industrial rail use. It is recommended that a Phase II soil and groundwater investigation be conducted for contaminants commonly found in association with railroads, as total petroleum hydrocarbons, lead, and arsenic are likely to be present at levels that would require action once the soil is encountered or moved.

Based on the field survey, historical research, and database search, two "high-risk" parcels have been identified within the project area. Partial ROW acquisitions are anticipated for these parcels, which are owned by the LAHD. Refer to Table 2.12.1 for more detailed information regarding the type of hazardous concern at each parcel.

- **West Basin Container Terminal (APN 7440-025-904):** Based on the reconnaissance-level visit and available information, this facility was observed to have petroleum pipelines abandoned in-place adjacent to Front Street. There is a likelihood that these pipelines have leaked. In addition, volatile organic compounds (VOCs) and petroleum hydrocarbons associated with crude oil are likely present. This container terminal property is currently undergoing remediation. It is recommended that site soil and groundwater investigation be performed prior to construction. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary,

Table 2.12.1: Detailed Hazardous Materials Concerns by Parcel

Address, APN, and Current Occupant/Type of Business	Type of Project Use Under the Build Alternative	Types of Concern	Proposed for Site Investigation?
Pacific Harbor Rail Line APN 7448-035-927	Partial Acquisition, TCE	It should be noted that the railroad right-of-way is not currently in use. The Pacific Harbor Line property, which will be crossed by the freeway ramp structures, is suspected to contain hazardous materials associated with industrial rail use. It is recommended that soil and groundwater investigation be performed prior to completion of the PA/ED phase. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment.	Yes
West Basin Container Terminal APN 7440-025-904	Partial Acquisition	Petroleum-related pipelines are reported to be present at this parcel, and the pipelines in the corridor were removed or abandoned in-place due to underground utility conflicts and/or safety concerns between 1995 and 2014. There is a likelihood that these pipelines have leaked. In addition, VOCs and petroleum hydrocarbons associated with crude oil are likely and have resulted in a recommendation that ongoing monitoring and remediation activities be observed as the design process continues, especially near Front Street. This location is currently being remediated. Based on the open regulatory case status and available groundwater and soil data, the West Basin Container Terminal listing is expected to be an environmental concern for the proposed project. It is recommended that soil and groundwater investigations be performed prior to construction to determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment.	Yes
Cruise Terminal Parcel APN 7440-024-911	Partial Acquisition	The Port of Los Angeles property east of Harbor Boulevard is suspected to contain petroleum hydrocarbons. It is recommended that soil and groundwater investigations be conducted prior to any soil excavation within the project area at the cruise terminal parcel located across from the eastbound ramp termini. Based on the open regulatory case status and ongoing remediation efforts, the Cruise Terminal listing is expected to be an environmental concern for the proposed project. As of July 2018, soil remediation at the terminal property was 85 percent complete. The remaining soil remediation is expected to be completed during the construction phase of the Front Street Beautification project, scheduled for June 2019.	Yes

Source: *Initial Site Assessment* (February 2017); *Addendum to the Initial Site Assessment* (December 2018)
Note: The sites of the potential hazardous waste concerns are shown on Figure 2.12-1.
APN = Assessor's Parcel Number
TCE = temporary construction easement
VOCs = volatile organic compounds



LEGEND

Hazardous Waste Project Area

Potential Hazardous Waste Parcels Risk Level

High

Medium

0 175 350

FEET

SOURCE: Bing (2015); AECOM (11/2017)

I:\AEM1602\GIS\MXD\HAzMaterials.mxd (5/18/2018)

FIGURE 2.12-1

SR-47/VincentThomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project

Sites of Potential Hazardous Waste Concerns for the Build Alternative

07-LA-47 PM 0.3/0.8

EA No. 07-31850

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subsurface investigations will be performed according to the recommendations of the assessment.

- **Cruise Terminal Parcel (APN 7440-024-911):** Based on the results of the reconnaissance-level visit and available information, this POLA property east of Harbor Boulevard is suspected to contain petroleum hydrocarbons. It is recommended that a soil and groundwater investigation be conducted prior to any soil excavation within the project area at the cruise terminal parcel located across from the eastbound ramp termini. This would provide the ability to assess the potential presence of hazardous contaminants and determine disposal options if necessary for any contaminated soil. Additionally, during construction, the construction contractor will monitor soil excavation for visible soil staining, odor, and the possible presence of unknown hazardous material sources.

Aerially Deposited Lead

SR-47 was constructed between 1952 and 1963 (ISA 2017) and has been heavily traveled. Therefore, the potential for lead contamination to exist within exposed soils along SR-47 due to aerially deposited lead (ADL) is likely to remain. ADL from the historical use of leaded gasoline exists along roadways throughout California. Soils with elevated concentrations of lead as a result of ADL are likely present on the State highway system ROW within the project area. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between the California Department of Transportation (Caltrans) and the DTSC. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

It is recommended that a Phase II soil investigation be conducted to assess the potential presence of ADL in the project area. Lead in soil along SR-47 and its interchange ramps to certain depths can be expected and is evident in investigations previously conducted nearby on SR-47 and Interstate (I) 110. The LAHD intends to remove any ADL off-site and has a policy to not reuse soils contaminated with ADL on Caltrans ROW, such as within the proposed project limits.

Lead Chromate

Yellow pavement traffic markings (thermoplastic and paint) on SR-47 and the arterials crossing SR-47 potentially contain hazardous levels of lead chromate.

Polychlorinated Biphenyls

Pole-mounted transformers were noted along major thoroughfares in the project area and are the responsibility of the public utility companies. The relocation of utility-owned facilities within the project area may be required. No staining or leaks were observed beneath the transformers, and all the transformers appear to be in good condition.

Asbestos-Containing Materials and Lead-Based Paint

According to the Los Angeles County Office of the Assessor, several of the parcels within the ISA study area were developed prior to 1980 and therefore have the potential to contain asbestos-containing materials (ACM) and lead-based paint (LBP). The presence of these materials would pose a potential hazardous waste risk if demolition of any of these structures is required. However, at this time, demolition of structures within the project area is not anticipated.

In addition to the structures on parcels within the project area, the bridges, overpasses, interchanges, entrance and exit ramps, and other features of SR-47 have the potential to contain ACM and LBP, which would also impact any demolition activities and, as such, would require special removal, handling, and disposal.

Soil and/or Groundwater Contamination

As discussed earlier, soil and/or groundwater contamination has been identified at properties in the vicinity of the maximum disturbance limits and parcels proposed for TCEs within the Build Alternative. Shallow groundwater is expected within the project area. Refer to Table 2.12.1 for more detailed information regarding the properties with potential groundwater and/or soil contamination at parcels identified for partial acquisition or TCEs under the Build Alternative.

Other Observations

As discussed briefly earlier, petroleum pipelines were identified within the boundaries of SR-47 and the existing railroad ROW, particularly at the property on APN 7440-025-904 (West Basin Container Terminal), which would be utilized as a TCE. Based on the observed conditions, there is a likelihood that this pipeline has leaked. As a result, VOCs and petroleum hydrocarbons associated with crude oil are likely present, resulting in a continuation of ongoing remediation efforts.

An existing railroad has been present within the SR-47 ROW since prior to 1901. Elevated levels of petroleum hydrocarbons, lead concentrations, and hazardous

materials associated with treated wood, as well as herbicide/pesticide residues, are likely to be present within the SR-47 ROW soils associated with railroad. As a result, active and inactive railroad beds likely have concentrations of petroleum products and lead elevated above natural background conditions. The LAHD has conducted the top-soil testing for the "medium risk" railroad property using a current on-call program. Results of this investigation recommend further testing of soil to the top of groundwater, and testing of the groundwater itself. The proposed project would involve a partial acquisition of this railroad property (APN 7448-035-927), as described in more detail in Table 2.12.1.

2.12.3 Environmental Consequences

2.12.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Temporary impacts related to hazardous materials/wastes during project construction could occur within the maximum disturbance limits for the Build Alternative as described in the following sections.

Impacts Within the Maximum Disturbance Limits

Aerially Deposited Lead

ADL from the historical use of leaded gasoline exists along roadways throughout California. Soils with elevated concentrations of lead as a result of ADL are likely present on the State highway system ROW within the limits of the Build Alternative. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016 ADL Agreement between Caltrans and the DTSC. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

As discussed in Section 2.12.2.2, since the potential for lead contamination to exist within exposed soils along SR-47 due to ADL may remain, verification sampling should occur in order to confirm no ADL is present. Project Feature PF-HAZ-1 specifically requires that ADL studies be conducted along the SR-47 ROW to determine whether contamination exists in association with ADL.

PF-HAZ-1 Prior to the completion of Plans, Specifications, and Estimates (PS&E), shallow subsurface soil sampling will be conducted for aerially deposited lead (ADL) in unpaved locations immediately adjacent to State Route (SR) 47 for ADL-related impacts.

The soil ADL evaluation and/or investigation will be consistent with the new California Department of Toxic Substances Control (DTSC) ADL Agreement contaminant concentration limits. In addition, new DTSC ADL Agreement soil reuse requirements and restrictions will apply.

Hazardous Materials/Wastes During Construction

Typical hazardous materials anticipated to be used during construction of the Build Alternatives (e.g., solvents, paints, fuels) and hazardous wastes generated during construction would be handled in accordance with applicable federal and State regulations and Caltrans policies regarding the use, storage, handling, disposal, and transport of those materials. As a result, the Build Alternative would not result in adverse impacts related to the use of hazardous materials or the generation of hazardous wastes during construction.

Polychlorinated Biphenyls

There may be polychlorinated biphenyls (PCBs) in pad- and pole-mounted transformers within the maximum disturbance limits for the Build Alternative. None of those transformers appeared to be leaking during the site reconnaissance visits. If any leaking transformers are noted during the property acquisition for and construction of the Build Alternative, those leaks would be considered a PCB hazard unless tested and confirmed otherwise, and must be handled accordingly. As a result, the Build Alternative would not result in adverse impacts related to PCBs.

Pavement Marking Materials

Yellow traffic striping and pavement-marking materials (paint, thermoplastic, permanent tape, and temporary tape) that would be removed from the SR-47 ramps and from arterials at their crossings of SR-47 during construction of the Build Alternative may contain elevated concentrations of metals such as lead. Removal of these materials during construction could affect construction workers and the surrounding environment. However, Project Feature PF-HAZ-2 would minimize this effect.

PF-HAZ-2 During the design phase, the yellow traffic striping and pavement marking materials will be tested for lead and lead chromate. If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance

with the California Department of Transportation (Caltrans) *Construction Manual* (July 2017), Chapter 7, Section 7-107, Hazardous Waste and Contamination.

As a result, the Build Alternative would not result in adverse impacts related to yellow traffic striping and pavement marking materials.

Asbestos-Containing Materials and Lead-Based Paint

ACM and LBP represent a concern when they are subject to damage. However, no structure demolitions are required under the Build Alternative. Therefore, no adverse impacts related to ACM or LBP are anticipated.

Potentially Contaminated Soil and/or Groundwater

The Build Alternative could disturb potentially contaminated soil and/or groundwater originating at properties outside the maximum disturbance limits and the boundaries of property. Shallow groundwater is expected within the project area. Three parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines or past railroad activities. Construction activities that may come in contact with groundwater are retaining wall construction and new or modified roadway drainage systems. Off-site removal of any nearby contaminated top-soil is recommended before subsurface activities begin. Geological boring, including groundwater depth, will be completed during Final Design to assist in retaining wall and grading design. Should the contractor encounter groundwater during construction they are to follow protocol described in the Caltrans "Field Guide to Construction Site Dewatering" and the Construction General Permit. Soil and groundwater investigations at or near these parcels will be conducted in order to assess the potential presence of hazardous contaminants and to determine disposal options if necessary for any contaminated groundwater. Project Feature PF-HAZ-3 allows for site investigations and potentially more extensive subsurface investigations to be performed at these sites in order to determine the extent of potential contamination.

PF-HAZ-3 Supplemental site investigations, including soil and groundwater investigations, will be performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels.

As discussed in Section 2.9, Water Quality and Storm Water Runoff, groundwater dewatering during construction may be required. As specified in Project Feature PF-WQ-2, provided in Section 2.9.3.1, if dewatering is required, construction site dewatering would comply with one of three orders, or any subsequent orders, that apply to groundwater discharges to surface waters within the area depending on the depth and quality of the groundwater.

As a result of implementation of PF-HAZ-3 and PF-WQ-2, the Build Alternative would not result in adverse impacts related to contaminated soil and/or groundwater at these parcels.

Impacts Associated with Temporary Construction Easements and Partial Acquisitions

The Build Alternative would result in a partial acquisition at one parcel and TCEs at two parcels. The parcels and the potential risks associated with the acquisition of land from one parcel under the Build Alternative are as follows.

Petroleum Pipelines

Petroleum-related pipelines are reported to be present at the West Basin Container Terminal (APN 7440-025-904), the Cruise Terminal Parcel (APN 7440-024-911), and the Pacific Harbor Rail Line (APN 7448-035-927). Due to the close proximity of the observed petroleum pipelines to the proposed project and the likelihood that these pipelines have leaked, as discussed earlier, VOCs and petroleum hydrocarbons associated with crude oil are likely to be present. Project Feature PF-HAZ-3 requires that a supplemental site investigation be performed for these parcels to identify potential hazards associated with contaminated soil and groundwater that may occur during project construction. The site investigation would provide the appropriate treatment for those hazards. As a result, the Build Alternative would not result in adverse impacts related to contaminated soil and/or groundwater at these parcels.

In the event that unanticipated materials are encountered during construction activities, Project Feature PF-HAZ-4 is included below.

PF-HAZ-4 During construction, the construction contractor will monitor soil excavation for visible soil staining, odor, and the possible presence of unknown hazardous material sources. If hazardous material contamination or sources are suspected or identified during project

construction activities, the construction contractor will be required to cease work in the area and to have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans *Construction Manual* (July 2017). Adequate protection to construction workers will be provided through the implementation of a Health and Safety Plan and a Soil Management Plan.

No Build Alternative

The No Build Alternative would not result in the disturbance or removal of any soils, groundwater, or structures, and therefore would not result in temporary impacts related to hazardous waste and materials.

2.12.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

Routine maintenance activities during operation of the Build Alternative would be required to follow applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the operation of the Build Alternative would not result in adverse impacts related to hazardous waste or materials.

No Build Alternative

The No Build Alternative would not change the existing physical environment; therefore, there would be no permanent impacts related to hazardous waste under this alternative. Similar to the Build Alternative, routine maintenance activities would continue under the No Build Alternative, including compliance with applicable regulations regarding the handling and disposal of potentially hazardous materials.

2.12.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project features outlined above in Sections 2.12.3.1 and 2.12.3.2, no adverse impacts related to hazardous waste would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

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2.13 Air Quality

2.13.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state Ambient Air Quality Standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$)—and sulfur dioxide (SO_2). In addition, national and State standards exist for lead (PB), and State standards exist for visibility-reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both State and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel "Conformity" requirement under the FCAA also applies.

2.13.1.1 Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to the State Implementation Plan (SIP) for attaining the NAAQS. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in

unclassifiable/attainment areas for NAAQS and do not apply at all for State standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide (SO_2). California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO_2, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emissions analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and Transportation Improvement Program (TIP); the project has a design concept and scope[1] that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and USEPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses)

[1] "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.13.2 Affected Environment

This section is based on the *Air Quality Report* (July 2018) prepared for the proposed State Route 47 (SR-47)/Vincent Thomas Bridge reconfiguration project.

2.13.2.1 Climate

The project site is located within the South Coast Air Basin (Basin), which includes Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the Basin is administered by the South Coast Air Quality Management District (SCAQMD), a regional agency created for the Basin.

The Basin climate is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern boundary, and high mountains surround the rest of the Basin. The region lies in the semipermanent high-pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, and Santa Ana wind conditions do occur in the Basin.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. Within the project area, the community of San Pedro experiences fairly mild weather, with average temperatures typically ranging from 46°F in the winter to 78°F in the summer. On average, the warmest month is August, and the coolest month is generally January.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern part of the Basin along the

coastal side of the mountains. The project area experiences the greatest amount of precipitation in the month of February.[1]

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed from midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Inversion layers have a substantial role in determining O_3 formation. Ozone and its precursors will mix and react to produce higher concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as CO. PM_{10} is both directly emitted and created indirectly in the atmosphere as a result of chemical reactions. Concentration levels are directly related to inversion layers due to the limitation of mixing space.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, when heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground level air to float up through the inversion layer.

The combination of stagnant wind conditions and low inversions produces the greatest concentration of pollutants. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into the counties of Riverside and San Bernardino. In the winter, the greatest pollution problems are from CO and oxides of nitrogen (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the

[1] The Weather Channel. 2018. Monthly Averages for San Pedro. Website: https://weather.com/weather/monthly/l/USCA1009:1:US (accessed May 9, 2018).

summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

2.13.2.2 Monitored Air Quality

The SCAQMD operates several air quality monitoring stations within the project vicinity. The air quality monitoring station closest to the project site is the Long Beach Hudson Monitoring Station at 2425 Webster Street, which monitors three of the six criteria pollutants (O_3, NO_2, and CO).The closest monitoring station with PM_{10} and $PM_{2.5}$ data is the South Long Beach Monitoring Station at 1305 East Pacific Coast Highway. Lead and SO_2 are not monitored because levels are considered low. Air quality trends identified from data collected at both air quality monitoring stations between 2013 and 2017 are listed in Table 2.13.1.

2.13.2.3 Sensitive Receptors

Sensitive populations (sensitive receptors) are more susceptible to the effects of air pollution than the general population. Sensitive populations in proximity to localized sources of toxics and CO are of particular concern. According to the SCAQMD, a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Land uses that are considered sensitive receptors include residences, hotels, schools, playgrounds, childcare centers, athletic facilities, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes.

Existing land uses in the project area include single- and multifamily residences, a church, a sport park, a dog park, a police dog training facility, commercial uses, utilities, and freight and parking areas of the Port of Los Angeles (POLA), a vehicle inspection area, and light industrial uses. The majority of the sensitive receptors in or adjacent to the project area are residential uses. Figure 2.13-1 shows existing land uses and the sensitive receptors closest to the proposed project.

2.13.2.4 Criteria Pollutant Attainment/Nonattainment Status

As noted earlier, the six criteria pollutants are O_3, CO, PM (including both $PM_{2.5}$ and PM_{10}), NO_2, SO_2, and lead. The primary standards for these criteria pollutants are shown in Table 2.13.2 along with a brief description of the health effects associated with exposures to these pollutants and the typical sources of these pollutants. The NAAQS are two-tiered: primary, to protect public health, and secondary, to prevent degradation to the environment (e.g., impairment of visibility, and damage to vegetation and property).

Table 2.13.1: Local Air Quality Levels

Pollutant	Primary Standard		Year	Maximum Concentration[1]	Number of Days State/Federal Standard Exceeded
	California	Federal			
Carbon Monoxide (CO)[2] (1 hr)	20.0 ppm for 1 hr	35 ppm for 1 hr	2013	4.1 ppm	0 / 0
			2014	3.7 ppm	0 / 0
			2015	3.3 ppm	0 / 0
			2016	3.3 ppm	0 / 0
			2017	2.3 ppm	0 / 0
Carbon Monoxide (CO)[2] (8 hrs)	9.1 ppm for 8 hrs	9.5 ppm for 8 hrs	2013	2.6 ppm	0 / 0
			2014	2.6 ppm	0 / 0
			2015	2.2 ppm	0 / 0
			2016	2.2 ppm	0 / 0
			2017	2.0 ppm	0 / 0
Ozone (O_3)[2] (1 hr)	0.09 ppm for 1 hr	N/A	2013	0.090 ppm	0 / N/A
			2014	0.087 ppm	0 / N/A
			2015	0.087 ppm	0 / N/A
			2016	0.079 ppm	0 / N/A
			2017	0.082 ppm	0 / N/A
Ozone (O_3)[2] (8 hrs)	0.07 ppm for 8 hrs	0.075 ppm for 8 hrs	2013	0.069 ppm	0 / 0
			2014	0.072 ppm	1 / 0
			2015	0.066 ppm	0 / 0
			2016	0.059 ppm	0 / 0
			2017	0.068 ppm	0 / 0
Nitrogen Dioxide (NO_2)[2] (1 hr)	180 ppb for 1 hr	100 ppb for 1 hr	2013	81.2 ppb	0 / 0
			2014	135.9 ppb	0 / 0
			2015	101.8 ppb	0 / 0
			2016	75.6 ppb	0 / 0
			2017	77.4 ppb	0 / 0
Nitrogen Dioxide (NO_2)[2] (annual average concentration)	30 ppb	53 ppb	2013	21.5	No / No
			2014	20.7	No / No
			2015	19.8	No / No
			2016	18.5	No / No
			2017	14.8	No / No
Particulate Matter (PM_{10})[3] (24-hr)	50 µg/m^3 for 24 hrs	150 µg/m^3 for 24 hrs	2013	54 µg/m^3	1 / 0
			2014	59 µg/m^3	2 / 0
			2015	62 µg/m^3	3 / 0
			2016	56 µg/m^3	3 / 0
			2017	52 µg/m^3	1 / 0
Particulate Matter (PM_{10})[3] (annual average concentration)	20 µg/m^3	N/A	2013	27.2 µg/m^3	Yes / N/A
			2014	26.5 µg/m^3	Yes / N/A
			2015	26.4 µg/m^3	Yes / N/A
			2016	27.8 µg/m^3	Yes / N/A
			2017	21.4 µg/m^3	Yes / N/A
Fine Particulate Matter ($PM_{2.5}$)[3] (24-hr)	N/A	35 µg/m^3 for 24 hrs	2013	42.6 µg/m^3	N/A / 2
			2014	52.2 µg/m^3	N/A / 2
			2015	48.3 µg/m^3	N/A / 4
			2016	28.9 µg/m^3	N/A / 0
			2017	36.4 µg/m^3	N/A / 1
Fine Particulate Matter ($PM_{2.5}$)[3] (annual average concentration)	12 µg/m^3	15 µg/m^3	2013	11 µg/m^3	No / No
			2014	13.1 µg/m^3	Yes / No
			2015	10.2 µg/m^3	No / No
			2016	9.6 µg/m^3	No / No
			2017	9.5 µg/m^3	No / No

Source: *Air Quality Report* (May 2018).

1 Maximum concentration is measured over the same period as the California standard.

2 Measurements taken at the Long Beach Hudson Monitoring Station, located at 2425 Webster Avenue, Long Beach, California 90810.

3 Measurements taken at the South Long Beach Monitoring Station, located at 1305 East Pacific Coast Highway, Long Beach, California 90806.

µg/m^3 = micrograms per cubic meter
hr/hrs = hour/hours
N/A = not applicable
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppb = parts per billion
ppm = parts per million

Table 2.13.2: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Period	California Standard	Federal Standard	Basin Attainment Status		Principal Health and Atmospheric Effects	Typical Sources
				California Standard	Federal Standard		
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	---	Non-Attainment	---	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NO_X) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Non-Attainment	Extreme Nonattainment		
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	Non-Attainment	Attainment / Maintenance	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
	Annual Arithmetic Mean	20 µg/m^3	---	Non-Attainment	---		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	---	35 µg/m^3		Nonattainment	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO_X, SO_X, ammonia, and ROG.
	Annual Arithmetic Mean	12 µg/m^3	12.0 µg/m^3	Non-Attainment	Moderate Nonattainment		
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Attainment	Attainment / Maintenance	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical O_3. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	Attainment	Attainment / Maintenance		
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	Attainment	Unclassifiable / Attainment	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the "NO_X" group of O_3 precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	---	Attainment / Maintenance		
Lead (Pb)	30-day average	1.5 µg/m^3	---	Attainment[5]	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
	Rolling 3-month average	---	0.15 µg/m^3	---	Non-Attainment (Partial)		
	Calendar Quarter	---	1.5 µg/m^3	---	Attainment		

Table 2.13.2: State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Period	California Standard	Federal Standard	Basin Attainment Status		Principal Health and Atmospheric Effects	Typical Sources
				California Standard	Federal Standard		
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	Attainment / Unclassified	Attainment/ Unclassified	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm	Attainment / Unclassified	Attainment/ Unclassified		
	Annual Arithmetic Mean	---	0.030 ppm	---			
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	---	Attainment/ Unclassified	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	---	Attainment/ Unclassified	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes.
Sulfates	24-hour	25 µg/m^3	---	Attainment/ Unclassified	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Visibility-Reducing Particles	8 hour	See footnote 1	---	Attainment/ Unclassified	---	Reduces visibility. Produces haze. Note: not related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.

Source: *Air Quality Assessment Report* (May 2018).

[1] In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

µg/m^3 = micrograms per cubic meter
Basin = South Coast Air Basin
CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
NAAQS = National Ambient Air Quality Standards
NO_X = oxides of nitrogen
ppm = parts per million
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_X = oxides of sulfur
VOC = volatile organic compounds



LEGEND

- Project Location
- Single Family Residential
- Multi-Family Residential
- Education
- Open Space and Recreation

0 250 500
FEET

SOURCE: Bing Maps (2015); AECOM (11/2017); SCAG (2012); LA County LMS Database (1/2016)

I:\AEM1602\GIS\SensitiveReceptorLocations.mxd (12/12/2018)

FIGURE 2.13-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Sensitive Receptors
07-LA-47 PM 0.3/0.8
EA No. 07-31850

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Air quality monitoring stations are located throughout the nation and maintained by the local air quality districts and State air quality regulating agencies. Data collected at permanent monitoring stations are used by the United States Environmental Protection Agency (USEPA) to identify regions as "attainment," "nonattainment," or "maintenance," depending on whether the regions meet the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of nonattainment (e.g., marginal, moderate, serious, severe, and extreme) are used to classify each air basin in the State on a pollutant-by-pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and comply with the NAAQS. The Basin's attainment status for each of the criteria pollutants is listed in Table 2.13.2.

2.13.3 Environmental Consequence

2.13.3.1 Short-Term Impacts

Build Alternative (Preferred Alternative)

Construction Air Quality Conformity

Construction activities would not last for more than 3 years at one general location; therefore, construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR, Section 93.123(c)(5)).

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, NO_X, VOCs, directly emitted PM ($PM_{2.5}$ and PM_{10}), and toxic air contaminants (TACs) (e.g., diesel exhaust PM).

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, and paving roadway surfaces. Construction-related effects on air quality from most roadway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate CO, NO_X, VOCs, PM_{10}, and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after drying. 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 also depend on soil moisture, the silt content of soil, wind speed, and the amount of equipment operating at the time. Larger dust particles would settle near the source, while finer particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the USEPA to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. The Caltrans Standard Specifications (Section 14) on dust minimization require use of water or dust-palliative compounds and would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, 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 while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site. Areas within 500 feet of CARB-defined sensitive land uses would be labeled as no-idle areas where material storage/transfer and equipment maintenance activities are not to occur.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting federal standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO_2-related issues due to diesel exhaust would be minimal.

The construction emissions were estimated for the proposed project using the Sacramento Metropolitan AQMD's Road Construction Emissions Model, Version 8.1.0, which is consistent with the guidance provided by the SCAQMD for evaluating construction impacts from roadway projects. The maximum amount of construction-related emissions during a peak construction day is presented in Table 2.13.3 (model data are provided in Appendix C of the *Air Quality Report*). The PM_{10} and $PM_{2.5}$ emissions assume a 50 percent control of fugitive dust as a result of watering and associated dust-control measures. The emissions presented below are based on the best information available at the time of calculations and specify that the schedule for

Table 2.13.3: Estimated Daily Construction Emissions

Construction Phase	Pollutant (lbs/day)				
	VOC	CO	NO_X	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	0.86	6.49	9.58	10.40	2.44
Grading/Excavation	4.98	42.78	52.92	12.43	4.27
Drainage/Utilities/Sub-Grade	3.75	35.44	36.36	11.71	3.66
Paving	1.41	17.17	14.59	0.85	0.69
Maximum	4.98	42.78	52.92	12.43	4.27
Total (tons/construction project)	0.95	8.64	9.78	2.70	0.88

Source: *Air Quality Report* (May 2018).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
VOC = volatile organic compounds

the Build Alternative is anticipated to take approximately two years beginning in 2021. Additionally, SCAQMD has established rules for reducing fugitive dust emissions. With the implementation of standard construction measures (providing 50 percent effectiveness) such as frequent watering (e.g., a minimum of twice per day) as well as Project Features PF-AQ-1 through PF-AQ-5 and Measure AQ-6, fugitive dust and exhaust emissions from construction activities would not result in any adverse air quality impacts.

PF-AQ-1 During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on-site or off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.

PF-AQ-2 Project grading plans will show the duration of construction. Ozone (O_3) precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.

PF-AQ-3 All trucks that are to haul excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.

PF-AQ-4 The contractor will adhere to the California Department of Transportation (Caltrans) Standard Specifications for Construction, Sections 14.9-02 and 14-9.03.

PF-AQ-5 All construction vehicles both on- and off-site will be prohibited from idling in excess of five minutes. No idle areas will be sited within 500 feet of the residences to the south of the project site.

Implementation of the following standard California Department of Transportation (Caltrans) construction measures, some of which may also be required for other purposes such as stormwater pollution control, would reduce air quality impacts resulting from construction activities. Please note that although these measures are anticipated to reduce construction-related emissions, these reductions cannot be quantified at this time.

- The construction contractor must comply with the Caltrans Standard Specifications in Section 14:
  - Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
  - Section 14 is directed at controlling dust. If dust-palliative materials other than water are to be used, material specifications are described in Section 18.
- Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion either at the point of emissions or at the right-of-way line depending on local regulations.

- Soil binder will be spread on any unpaved roads used for construction purposes, and on all project construction parking areas (providing an estimated 50 percent reduction of fugitive emissions).
- Trucks will be washed as they leave the right-of-way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations (CCR) Title 17, Section 93114.
- A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.
- Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited, to the extent feasible.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
- All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce PM emissions.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown PM in the area. Be aware that certain methods of mulch placement, such as straw blowing, may themselves cause dust and visible emission issues and may require controls such as dampened straw.

Naturally Occurring Asbestos

The proposed project is in Los Angeles County, which is among the counties listed as containing serpentine and ultramafic rock. However, the portion of Los Angeles County in which the proposed project lies is not known to contain serpentine or

ultramafic rock, according to the California Department of Conservation, Division of Mines and Geology (2000). Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. In the unlikely event that naturally occurring asbestos, serpentine, or ultramafic rock is discovered, SCAQMD would be notified per Section 93105, Title 17 of the CCR. Additionally, although there are structures within the project area that potentially contain asbestos, they would not be demolished or structurally modified. Additionally, Measure AQ-6 would be implemented should the project geologist determine that asbestos-containing materials (ACMs) are present at the project study area during final inspection. If ACMs are found to be present, appropriate methods would be implemented to remove them prior to construction.

Lead

Aerially deposited lead (ADL) from the historical use of leaded gasoline exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as a result of ADL on the State Highway system right-of-way within the limits of the Build Alternative. Soils determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016 ADL Agreement between Caltrans and the California Department of Toxic Substances Control (DTSC). This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

Since the potential for lead contamination to exist within exposed soils along SR-47 due to ADL may remain, verification sampling should occur in order to confirm that no ADL is present. Project Feature PF-HAZ-1 specifically requires ADL studies to be conducted along the SR-47 right-of-way to determine whether or not contamination exists in association with ADL.

No Build Alternative

The No Build Alternative would not result in the construction of any improvements to SR-47 in the project area and, therefore, would not result in temporary impacts to air quality.

2.13.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

The purpose of the proposed project is to modify the existing on- and off-ramps to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas

Bridge and Front Street/Harbor Boulevard Interchange; and to improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community.

The emissions modeling results are summarized in Table 2.13.4.

Table 2.13.4: 2023 Opening Year and 2045 Horizon Year Regional Vehicle Emissions

Alternative	2023 Opening Year (lbs/day)							2045 Horizon Year (lbs/day)						
	Vehicle Exhaust					Fugitive Dust		Vehicle Exhaust					Fugitive Dust	
	CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Existing (2015)	50	3.6	14	0.20	0.18	2.00	0.53	50	3.6	14	0.20	0.18	2.00	0.53
No Build Alternative	46	1.5	19	0.16	0.15	2.37	0.63	54	2.7	79	0.11	0.11	3.30	0.89
Change from Existing (2015)	*-4*	*-2.1*	*5*	*-0.04*	*-0.04*	*0.36*	*0.10*	*4*	*-0.9*	*65*	*-0.09*	*-0.08*	*1.30*	0.36
Build Alternative	26	0.7	8	0.09	0.08	2.61	0.70	20	1.4	27	0.07	0.07	3.85	1.04
Change from Existing (2015)	*-24*	*-2.8*	*-6*	*-0.11*	*-0.10*	*0.61*	*0.17*	*-29*	*-2.2*	*13*	*-0.12*	*-0.11*	*1.85*	*0.51*
Change from No Build Alternative	-19	-0.8	-12	-0.07	-0.07	0.25	0.07	-33	-1.3	-52	-0.04	-0.04	0.55	0.15

Source: *Air Quality Report* (May 2018).
Note: Totals may not appear to sum correctly due to rounding. Fugitive dust is comprised of tire and brake wear and re-entrained road dust.
CO = carbon monoxide
EMFAC = Emissions Factors Model
lbs/day = pounds per day
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases

As Table 2.13.4 shows the vehicle exhaust emissions in the 2023 Opening Year conditions, the No Build and Build Alternative emissions are all lower than the Existing condition emissions, except for NOx which is only lower for the Build Alternative. Additionally, the Build Alternative criteria pollutant emissions from vehicle exhaust are all less than the No Build Alternative emissions.

Regional Air Quality Conformity

The proposed project is listed in the 2016 financially constrained Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Amendment No. 2, which was found to conform by the Southern California Association of Governments (SCAG) on July 6, 2017. The proposed project is listed under RTP ID No. 1120007. The proposed project is also included in Amendment 17-02 of the 2017 FTIP under FTIP ID No. LA0G1290, which was approved by SCAG on January 3, 2017, and by the FTA/FHWA on February 21, 2017. The design concept and scope of

the proposed project are consistent with the Project Description in the 2016 RTP and the 2017 FTIP and the "open to traffic" assumptions of the SCAG's regional emissions analysis. Conformity status information is summarized in Table 2.13.5. Copies of relevant pages from the RTP/SCS and FTIP are included in Appendix C.

Table 2.13.5: Status of Plans Related to Regional Conformity

MPO	Plan/TIP	Date of Adoption by MPO	Date of Approval by FHWA	Last Amendment	Date of Approval by FHWA of Last Amendment
SCAG	Regional Transportation Plan/Sustainable Communities Strategy	April 7, 2016	June 2016	Amendment No. 2	May 12, 2017
SCAG	Transportation Improvement Program (FSTIP approval)	September 14, 2016	December 16, 2016	Amendment No. 17–14	November 29, 2017

FHWA = Federal Highway Administration
FSTIP = Federal Statewide Transportation Improvement Program
MPO = Metropolitan Planning Organization
SCAG = Southern California Association of Governments
TIP = Transportation Improvement Program

Project Level Conformity

The proposed project is located in an attainment/maintenance area for federal CO standards, a nonattainment area for federal $PM_{2.5}$ standards, and an attainment/ maintenance area for federal PM_{10} standards; thus a project-level hot-spot analysis is required under 40 CFR 93.109 for all three pollutants. The proposed project does not cause or contribute to any new localized CO, $PM_{2.5}$, and/or PM_{10} violations, or delay timely attainment of any NAAQS or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis).

Carbon Monoxide

The methodology required for a CO local analysis is summarized in the Caltrans *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol) (December 1998), Section 3 (Determination of Project Requirements) and Section 4 (Local Analysis).

In Section 3, the CO Protocol provides two conformity requirement decision flowcharts designed to assist project sponsors in evaluating the requirements that apply to specific projects. The flowchart in Figure 1 (Air Quality Report, Appendix E) of the CO Protocol applies to new projects and was used in this local analysis conformity decision. Below is a step-by-step explanation of the flow chart. Each level

cited is followed by a response, which in turn determines the next applicable level of the flowchart for the project.

The flowchart begins with Section 3.1.1.

- **3.1.1. Is this project exempt from all emissions analyses?**
  NO.

  Table 1 of the CO Protocol is Table 2 of 40 CFR, Section 93.126. Section 3.1.1 inquires whether the project is exempt. Such projects appear in Table 1 of the CO Protocol. The freeway ramp reconfiguration of the Build Alternative is not one of the exempt projects listed in Table 1. Therefore, the proposed project is not exempt from all emissions analyses.

- **3.1.2. Is the project exempt from regional emissions analyses?**
  NO.

  Table 2 of the CO Protocol is Table 3 of 40 CFR, Section 93.127. The question attempts to determine whether the proposed project is listed in Table 2. Projects that are included in Table 2 of the CO Protocol are exempt from regional conformity. Because the proposed project would reconfigure ramps for an existing highway, it is not exempt from regional emissions analysis.

- **3.1.3. Is the project locally defined as regionally significant?**
  YES.

  As mentioned above, the proposed project would reconfigure ramps for an existing highway. Therefore, the proposed project is regionally significant.

- **3.1.4. Is the project in a federal attainment area?**
  NO.

  The proposed project is in an attainment/maintenance area for the federal CO standard; therefore, the proposed project is subject to a regional conformity determination.

- **3.1.5. Is there a currently conforming RTP and TIP?**
  YES.

- **3.1.6. Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?**
  YES.

  The proposed project is listed in the financially constrained list of projects in the 2016 RTP/SCS under RTP ID No. 1120007 as amended in Amendment No. 2 adopted on July 6, 2017. The proposed project is listed in Amendment 17-02 of the 2017 FTIP (FTIP ID No. LA0G1290), which was approved by the FTA and FHWA on February 21, 2017 (see Appendix C). The 2017 FTIP Amendment was approved by SCAG on January 3, 2017, and by the FTA/FHWA on February 21, 2017.

- **3.1.7. Has the project design concept and/or scope changed significantly from that in the regional analysis?**
  NO.

  As discussed in Section 3.1.6, regional conformity for the proposed project has been demonstrated for the RTP and the FTIP.

- **3.1.9. Examine local impacts.**
  Section 3.1.9 of the flowchart directs the project evaluation to Section 4 (Local Analysis) of the CO Protocol. This concludes Figure 1.

  Section 4 contains Figure 3 (Local CO Analysis). This flowchart is provided in Appendix E of the *Air Quality Report* (May 2018) and used to determine the type of CO analysis required for the Build Alternative. Below is a step-by-step explanation of the flowchart. Each level cited is followed by a response, which in turn determines the next applicable level of the flowchart for the Build Alternative. The flowchart begins at Level 1.

- **Level 1. Is the project in a CO non-attainment area?**
  NO.

  As stated in Section 3.1.4, the project site is in an area that has demonstrated attainment with the federal CO standards.

- **Level 1 (cont.). Was the area redesignated as "attainment" after the 1990 Clean Air Act?**
  YES.

- **Level 1 (cont.). Has "continued attainment" been verified with the local Air District, if appropriate?**
  YES.

  The Basin was designated as attainment/maintenance by the USEPA on June 11, 2007 (Proceed to Level 7).

- **Level 7. Does the project worsen air quality?**
  YES

  a. *The project significantly increases the percentage of vehicles operating in cold start mode. Increasing the number of vehicles operating in cold start mode by as little as 2% should be considered potentially significant.*

     All vehicles on the freeway and in the intersections are assumed to be in a fully warmed-up mode. Therefore, this criterion is not met.

  b. *The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5% should be considered potentially significant. Increasing the traffic volume by less than 5% may still be potentially significant if there is also a reduction in average speeds.*

     The proposed project would improve safety and operation for vehicles exiting SR-47. Proposed improvements also include modification of the entrance ramps and modification of Harbor Boulevard and Front Street approaching and between the ramp termini. As shown in Table 2.13.6, the proposed project is not expected to result in a substantial change to traffic volumes on SR-47 or adjacent streets. The apparent increase in traffic volumes and stop delays for the Build Alternative scenarios at the Front Street and Knoll Drive/West Basin Container Terminal (WBCT) Gate 2 intersection is actually the relocation of traffic from the existing Front Street/Harbor Boulevard and SR-47 Ramps/ Swinford Street intersection.

     However, while the proposed project would not result in a substantial change overall, this criterion is not met.

Table 2.13.6: Opening Year No Build and Build Cross-Street Traffic Data

Approach Leg	Description	Vehicle Type	2023 No Build			2023 Build		
			Traffic Volume		Daily Stop Delay (hr/day)	Traffic Volume		Daily Stop Delay (hr/day)
			AM Peak (veh/hr)	Daily (veh/day)		AM Peak (veh/hr)	Daily (veh/day)	
Intersection of Front St. and Knoll Dr./WBCT Gate 2								
EB	SR-47 WB Off-Ramp	Autos	N/A	N/A	N/A	472	8,507	48.9
		Trucks	N/A	N/A	N/A	140	981	8.8
WB	Gate 2	Autos	76	1,376	7.2	76	1,363	3.4
		Trucks	99	692	3.7	99	697	2.2
NB	Front St.	Autos	326	5,880	8.8	772	13,900	116.9
		Trucks	178	1,247	2.1	89	626	4.3
SB	Front St.	Autos	118	2,128	2.4	118	2,128	18.6
		Trucks	13	90	0.1	13	90	0.9
Intersection of Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.								
EB	SR-47 Off-Ramp	Autos	1,213	21,845	145.5	741	13,341	114.2
		Trucks	228	1,602	13.6	88	620	7.7
WB	Swinford St.	Autos	118	2,130	31.0	118	2,130	33.6
		Trucks	10	68	0.8	10	68	1.0
NB	Harbor Blvd.	Autos	1,241	22,343	315.3	1,241	22,343	184.6
		Trucks	36	256	3.6	36	256	2.1
SB	Front St.	Autos	131	2,358	31.5	507	9,137	97.5
		Trucks	48	338	4.7	68	475	3.0

Source: LAHD, email from Prashant Konareddy (November 9, 2017).
Notes: N/A = This intersection would not exist in the No Build Alternative scenario.
Conversion factor for autos, AM Peak to Daily: 18.01
Conversion factor for trucks, AM Peak to Daily: 7.022

EB = eastbound
hr/day = hours per day
NB = northbound
LAHD = City of Los Angeles Harbor Department
SB = southbound
SR-47 = State Route 47
WB = westbound
WBCT = West Basin Container Terminal
veh/day = vehicles per day
veh/hr = vehicles per hour

c. *The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.*

As shown in Table 2.13.7, while the total delay for autos and trucks for the Front Street and Knoll Drive/WBCT Gate 2 intersection would be higher for the Build Alternative scenario compared to the No Build Alternative scenario, by combining the No Build Front Street and Westbound SR-47 On-Ramp delay that would be relocated to the Front Street and Knoll Drive/WBCT Gate 2 intersection in the Build Alternative scenario, a substantial reduction in overall delay is shown. Additionally, there would not be a significant change to the delay of diesel vehicles (trucks) at the intersections. However, this criterion is not met.

Table 2.13.7: Project Intersection Total Delay

Description	Vehicle Type	Intersection Stop Delay (total hours/day for all vehicles passing through)	
		No Build	Build
2023 Opening Year			
Front St. and Knoll Dr./WBCT Gate 2 (Front St. and SR-47 WB On-Ramp)	Autos	18 (2,831)	188 (0)
	Trucks	6 (34)	16 (0)
Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.	Autos	523	430
	Trucks	23	14
2045 Horizon Year			
Front St. and Knoll Dr./WBCT Gate 2 (Front St. and SR-47 WB On-Ramp)	Autos	33 (7,712)	673 (0)
	Trucks	15 (483)	91 (0)
Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.	Autos	4,718	1,258
	Trucks	402	133

Source: *Air Quality Report* (May 2018).
SR-47 = State Route 47
WB = westbound
WBCT = West Basin Container Terminal

- **Level 7 (cont.): Is the project suspected of resulting in higher CO concentrations than those existing within the region at the time of attainment demonstration?**

  NO.

  The following four intersections in the same region as the project location were evaluated in the 1997 CO Attainment Demonstration: Wilshire Boulevard at Veteran Avenue, Sunset Boulevard at Highland Avenue, La Cienega Boulevard at Century Boulevard, and Long Beach Boulevard at Imperial Highway.

  CO concentrations at the intersections under study would be lower than those reported for the maximum of the intersections analyzed in the CO attainment plan because all of the following conditions, listed in Section 4.7.2 of the CO Protocol, are satisfied:

  - The receptor locations at the intersections under study are at the same distance or farther from the traveled roadway than the receptor locations used in the intersection in the attainment plan. The attainment plan evaluates the CO concentrations at a distance of 10 feet from the edge of the roadways. The CO Protocol does not permit the modeling of receptor locations closer than this distance.
  - The project intersection traffic volumes and geometries are not substantially different from those included in the attainment plan. Also, the intersections

under study have less total traffic and the same number of lanes or fewer than the intersections in the attainment plan.

- The assumed meteorology for the intersections under study is the same as the assumed meteorology for the intersections in the attainment plan. Both use the worst-case scenario meteorology settings in the California Line Source Dispersion Model, Version 4 (CALINE4) and/or the USEPA's CO hot-spot analysis model (a combination of the California Line Source Dispersion Model, Version 3 [CALINE3] dispersion modeling and the queueing algorithms from the Highway Capacity Manual [HCM] [CAL3QHC]).
- As shown in Table 2.13.8, the intersection traffic lane volumes are similar to or lower for the intersections under study than those assumed for the Wilshire Boulevard/Veteran Avenue intersection (the intersection with the highest traffic volumes) in the attainment plan. Note that the Build Alternative percent change from the 2003 AQMP intersection volumes are lower than the No Build Alternative.
- The percentages of vehicles operating in cold-start mode are the same or lower for the intersections under study compared to those used for the intersections in the attainment plan. All vehicles in the intersection are assumed to be in a fully warmed-up mode.
- The percentage of heavy-duty gas trucks in the intersections under study is the same or lower than the percentages used for the intersections in the attainment plan analysis. It is assumed that the traffic distribution at the intersections under study do not vary from the California EMFAC standards.
- The average delay and queue length for each approach are the same or less for the intersections under study compared to those found in the intersections in the attainment plan. The predicted levels of service (LOS) for the intersections under study range from LOS A to LOS F. The LOS for the intersections in the attainment plan are not listed; however, the traffic counts and intersection geometries correspond to LOS F for three out of four intersections in the attainment plan.
- The background CO concentrations in the vicinity of the project were 2.3 ppm for one hour and 2.0 ppm for eight hours in 2017, which are lower than the background concentrations for the intersections in the attainment plan, which varied from 5.3 ppm to 13.2 ppm for one hour and 3.7 ppm to 9.9 ppm for eight hours.

Table 2.13.8: Comparison of Peak-Hour Intersection Departure Traffic Volumes

Intersection	Scenario Year	Average Peak-Hour Lane Volume (AM)				Total Departure Intersection Volume and Percent Change[1]	
		NB	SB	EB	WB	AM Peak-Hour	
2003 AQMP							
Wilshire Blvd./Veteran Ave.	N/A	362	178	1,188	559	2,287	N/A
EXISTING							
Front St. and Knoll Dr./WBCT Gate 2	2015	200	89	0	7	296	(-87%)
Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.	2015	616	43	0	5	664	(-71%)
PROPOSED PROJECT							
No Build Alternative							
Front St. and Knoll Dr./WBCT Gate 2	2023	252	66	0	88	405	(-82%)
	2045	313	152	0	154	619	(-73%)
Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.	2023	639	60	480	64	1,243	(-46%)
	2045	1,136	104	677	240	2,156	(-6%)
Build Alternative							
Front St. and Knoll Dr./WBCT Gate 2	2023	431	66	306	88	890	(-61%)
	2045	859	148	446	154	1,606	(-30%)
Harbor Blvd./Front St. and SR-47 Ramps/Swinford St.	2023	426	192	207	64	889	(-61%)
	2045	757	318	285	240	1,600	(-30%)

Sources: Caltrans (1998) and LAHD (2018).
[1] Percent reduction is in comparison to the Wilshire Blvd./Veteran Ave. intersection as analyzed in the 2003 AQMP.

AQMP = Air Quality Management Plan
Caltrans = California Department of Transportation
EB = eastbound
N/A = not applicable
NB = northbound
LAHD = City of Los Angeles Harbor Department
SB = southbound
SR-91 = State Route 91
WB = westbound
WBCT = West Basin Container Terminal

The proposed project is not expected to result in any concentrations exceeding the 1-hour or 8-hour CO standards. Therefore, a detailed CALINE4 CO hot-spot analysis is not required.

Particulate Matter (PM_{10} and $PM_{2.5}$)

As Table 2.13.4 shows the vehicle exhaust emissions in the 2023 Opening Year, the No Build and Build Alternative PM_{10} and $PM_{2.5}$ emissions from vehicle exhaust are both lower than the Existing condition emissions. The fugitive $PM_{2.5}$ and PM_{10} emissions consist of tire wear, brake dust, and re-entrained road dust emissions that are purely related to the increased regional VMT.

In November 2015, the USEPA released an updated version of the *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas* (Guidance) for quantifying the local air quality impacts of transportation projects and comparing them to the PM NAAQS (75 *Federal Register* 79370). The USEPA originally released the quantitative guidance in December 2010, and released a revised version in November 2013 to reflect the

approval of EMFAC 2011 and USEPA's 2012 PM NAAQS final rule. The November 2015 version reflects MOVES2014 and its subsequent minor revisions such as MOVES2014a, to revise design value calculations to be more consistent with other USEPA programs, and to reflect guidance implementation and experience in the field. Note that EMFAC, not MOVES, should be used for project hot-spot analysis in California. The Guidance requires a hot-spot analysis to be completed for a project of air quality concern (POAQC). The final rule in 40 CFR 93.123(b)(1) defines a POAQC as:

i. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

ii. Projects affecting intersections that are Level of Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

iv. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; or

v. Projects in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ and PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The USEPA guidance for PM hot-spot analysis and interagency consultation was used to determine whether the project is a POAQC. On February 6, 2018, the Transportation Conformity Working Group (TCWG) determined that the proposed project is not a POAQC. Per the transportation conformity rules and regulations, all nonexempt projects must go through review by the TCWG. The proposed project was approved and concurred upon by Interagency Consultation at the TCWG meeting as a project not having adverse impacts on air quality, and the proposed project meets the requirements of the federal Clean Air Act (CAA) and 40 CFR, Section 93.116. A copy of the TCWG finding is included in the *Air Quality Report* (May 2018), provided in Appendix B.

Therefore, the Build Alternative meets the CAA requirements and 40 CFR, Section 93.116, without any explicit PM hot-spot analysis. As shown in Table 2.13.4, the PM_{10} and $PM_{2.5}$ exhaust emissions would be lower in the Build and No Build Alternatives than they are in the Existing (2015) condition. The PM_{10} and $PM_{2.5}$ exhaust emissions are also lower in the Build Alternative compared to the No Build Alternative in both the Opening and Horizon Year conditions. Thus, the Build Alternative would not create a new violation of the federal standards for PM_{10} or $PM_{2.5}$.

The proposed project is listed in the financially constrained list of projects in the 2016 RTP/SCS as amended by Amendment No. 2 and adopted on July 6, 2017, under RTP ID No, 1120007. Thus, the proposed project is included in the regional emissions analysis that was used to meet regional conformity thresholds and would not delay timely attainment of the PM_{10} or $PM_{2.5}$ NAAQS for the Basin area. On February 14, 2017, the FHWA published its determination that the proposed project conforms with the SIP in accordance with 40 CFR, Part 93. Construction and long-term operation of the proposed project would, therefore, be considered consistent with the purpose of the SIP, and the Build Alternative would conform to the requirements of the federal CAA. The proposed project is listed in Amendment 17-02 of the 2017 FTIP under the ID No. LA0G1290.

The SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project *Final Air Quality Conformity Report* was sent to the FHWA on January 23, 2018 for conformity determination. Approval was received on February 6, 2018 (refer to Chapter 4, for a copy of this determination).

Mobile-Source Air Toxics

FHWA released updated guidance in October 2016 (FHWA 2016) for determining when and how to address mobile source air toxics (MSAT) impacts in the NEPA process for transportation projects. FHWA identified three levels of analysis:

- No analysis for exempt projects or projects with no potential for meaningful MSAT effects;
- Qualitative analysis for projects with low potential MSAT effects; and
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Projects with no impacts generally include those that (a) qualify as a categorical exclusion under 23 CFR 771.117, (b) qualify as exempt under the FCAA conformity

rule under 40 CFR 93.126, and (c) are not exempt, but have no meaningful impacts on traffic volumes or vehicle mix.

Projects that have low potential MSAT effects are those that serve to improve highway, transit, or freight operations or movement without adding substantial new capacity or creating a facility that is likely to substantially increase emissions. The large majority of projects fall into this category.

Projects with high potential MSAT effects include those that:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel PM in a single location; or
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the annual average daily traffic (AADT) is projected to be in the range of 140,000 to 150,000, or greater, by the design year; and
- Are proposed to be located in proximity to populated areas or, in rural areas, in proximity to concentrations of vulnerable populations (i.e., schools, nursing homes, and hospitals).

The existing traffic on SR-47 near the project intersection is well below the criteria of 125,000 average daily trips or 10,000 truck trips. The proposed project is not expected to result in a substantial change to auto or truck volumes on SR-47 or adjacent streets. Consequently, the emission effects of the proposed project would be low, and it is expected that there would be no appreciable difference in overall MSAT emissions between the No Build and Build Alternatives.

Long-Term Regional Vehicle Emissions Impacts

Ozone, secondary PM_{10}, and secondary $PM_{2.5}$ are normally regional issues because they are formed by photochemical and chemical reactions over time in the atmosphere. For these pollutants, localized impact analysis is not meaningful. However, emissions analyses may be required in order to make some comparison with the Existing Baseline and No Build Alternative conditions. Formation of ozone and secondary PM are a function of ROG and NO_X emissions. As shown in Table 2.13.4, the emissions of ROG and NO_X are less for the Build Alternative compared to the No Build Alternative in both the 2023 Opening Year and the 2045 Horizon Year conditions. Thus, the proposed project would not result in increases in the emissions of ozone, secondary PM_{10}, or secondary $PM_{2.5}$.

The proposed project is listed in the financially constrained list of projects in the 2016 RTP/SCS under RTP ID No. 1120007, which includes a regional emissions analysis for ozone and PM. As described in the Program Environmental Impact Report for the 2016 RTP/SCS, "Both the 2016 RTP/SCS (which includes Amendment No. 1) and Amendment No. 2 meet the regional emissions and other tests set forth by the federal Transportation Conformity regulations, demonstrating the integrity of the State Implementation Plans prepared pursuant to the federal Clean Air Act for the non-attainment and maintenance areas in the SCAG region." Further, it concludes: "Despite temporary significant construction emissions, long-term criteria pollutant emissions by the County is (are) expected to decline with implementation of the Plan." Thus, as the proposed project is included in the 2016 RTP/SCS, it would also not result in a significant cumulative regional air quality effect.

No Build Alternative

The No Build Alternative would not result in any improvements to SR-47 in the project area. As shown in Table 2.13.4, the No Build Alternative would result in more regional emissions than the Build Alternative.

2.13.4 Avoidance, Minimization, and/or Mitigation Measures

Along with the project features identified above in Section 2.13.3.1, Measure AQ-6 would avoid and/or minimize potential adverse air quality impacts related to construction activities.

AQ-6 Should the project geologist determine that asbestos-containing materials (ACMs) are present at the project study area during final inspection prior to construction, the appropriate methods will be implemented to remove ACMs.

During operation, no avoidance, minimization, and/or mitigation measures are required, as the proposed project would not produce substantial operational air quality impacts.

2.13.5 Climate Change

Neither the USEPA nor the FHWA has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. The FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed

in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the NEPA determination for the project.

2.14 Noise

2.14.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

2.14.1.1 California Environmental Quality Act

CEQA requires a strict baseline versus build analysis to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the proposed project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 Code of Federal Regulations Part 772 (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

2.14.1.2 National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration involvement (and California Department of Transportation [Caltrans], as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.14-1 lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2.14-2 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

According to Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects* (Traffic Noise Analysis Protocol) (May 2011), a noise

Table 2.14-1: Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[1]	67 (Exterior)	Residential.
C[1]	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.

[1] Includes undeveloped lands permitted for this activity category.
dBA = A-weighted decibels
$L_{eq}(h)$ = one-hour A-weighted equivalent continuous noise level
NAC = Noise Abatement Criteria
NEPA = National Environmental Policy Act

Table 2.14-2: Noise Levels of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 300m (1000 ft)		
	100	
Gas Lawn Mower at 1 m (3 ft)		
	90	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)		Food Blender at 1 m (3 ft)
	80	Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime		
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime		Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	40	
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

dBA = A-weighted decibel(s)
ft = foot/feet
m = meter(s)
mph = miles per hour

impact occurs when the predicted future noise level of the proposed project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the proposed project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the proposed project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the proposed project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the proposed project.

The Caltrans *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction for all impacted

receptors in the future noise level must be achieved for an abatement to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. Additionally, a noise reduction of at least 7 dBA must be achieved at one or more benefited receptor for an abatement measure to be considered reasonable. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance and the cost per benefited residence.

2.14.2 Affected Environment

This section is based on the April 2018 *Noise Study Report* (NSR) and the December 2018 *Noise Abatement Decision Report* (NADR) prepared for the proposed project. The NSR followed Caltrans Traffic Noise Analysis Protocol.

2.14.2.1 Surrounding Land Use and Receptors

Developed and undeveloped land uses in the project area were identified through land use maps, aerial photography, and site inspection. Receptors were identified within each land use category. Existing land uses in the project area include single- and multifamily residences, classrooms and mechanic training facilities associated with a vocational school, a church, a sport park, a dog park, a police dog training facility, commercial uses, fountains, a bike sharing station, utilities, freight, and parking areas of the Port of Los Angeles (POLA), a vehicle inspection area, and light industrial uses. Existing land uses in the project area are described below in further detail.

- **Westbound Side of State Route 47, West of Front Street/Harbor Boulevard:** Land uses in this area include a single-family residence, classrooms and mechanic training facilities associated with a vocational school, a sport park, a dog park, a police dog training facility, and a vehicle inspection facility. Land uses in this area range in elevation from 40 feet (ft) lower than State Route (SR) 47 to 18 ft higher than SR 47. No existing walls shield these uses. The single-family residences were evaluated under Activity Category B, which has an exterior NAC of 67 dBA L_{eq}. The active sport areas were evaluated under Activity Category C, which has an exterior NAC of 67 dBA equivalent continuous sound level (L_{eq}). The dog park was classified as Activity Category C for reporting purposes. The interior areas of the vocational school classrooms were evaluated under Activity Category D, which has an interior NAC of 52 dBA L_{eq}. The automotive mechanic training facilities of the vocational school were evaluated under Activity Category D for reporting purposes. The police do training facility and vehicle inspection facility uses were classified as Activity Category F for reporting purposes.

- **Eastbound Side of SR 47, West of Front Street/Harbor Boulevard:** Land uses in this area include single- and multifamily residences, a church, commercial uses, and light industrial uses. Land uses in this area range in elevation from 34 ft lower than SR 47 to 32 ft higher than SR 47. An existing 7.6 ft to 10.3 ft high wall (Existing Wall [EW] No. 2) shields some of the residences from traffic noise. The single- and multifamily residences were evaluated under Activity Category B, which has an exterior NAC of 67 dBA L_{eq}. The interior area of the church was evaluated under Activity Category D, which has an interior NAC of 52 dBA L_{eq}. The commercial and light industrial uses were classified as Activity Category F for reporting purposes.
- **Westbound Side of SR 47, East of Front Street/Harbor Boulevard:** Land uses in this area include the freight and parking areas of POLA. Land uses in this area range in elevation from 31 ft to 43 ft lower than SR 47. No existing walls shield these uses. The freight and parking areas of POLA were classified as Activity Category F for reporting purposes.
- **Eastbound SR 47, East of Front Street/Harbor Boulevard:** Land uses in this area include fountains, a bike sharing station, and utilities. Land uses in this area range in elevation from 51 ft to 61 ft lower than SR 47. No existing walls shield these uses. The fountains, bike sharing station, and utilities were classified as Activity Category F for reporting purposes.

2.14.2.2 Existing Noise Level Measurements

The existing noise environment in the project area is described below based on short- and long-term noise monitoring that was conducted at representative receptor locations.

Short-Term Monitoring

The primary source of noise in the project area is traffic on SR 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard. Short-term (20-minute) noise measurements were conducted to document existing noise levels at 15 representative receptor locations in the project area. Short-term noise level measurements were conducted using Larson Davis Models 831, 824, 820 Type 1 sound level meters. Table 2.14-3 contains the results of the short-term noise level measurements and a description of the noise monitoring locations. Of the 15 short-term noise measurements, 12 were used to calibrate the noise model and to predict the noise levels at all 39 modeled receptors in the project area. Figure 2.14-1 shows the short-term monitoring locations.

Table 2.14-3: Short-Term Ambient Noise Monitoring Results

Monitor No.	Date	Start Time	Duration	dBA L_{eq}	Land Use	Location Description	Noise Source	Comments
ST-1	11/7/2017	1:17 PM	20 minutes	57.7	School	740 Pacific Avenue. Harbor Occupational Center, near Building G.	Traffic on SR 47.	Terrain partially blocks line of sight with SR-47.
ST-2	11/7/2017	1:17 PM	20 minutes	58.1	Sport Area	766 North Center Street. Eastview Little League, between 2 eastern baseball fields.	Traffic on SR 47 and distant equipment at POLA.	No shielding.
ST-3	11/7/2017	1:17 PM	20 minutes	64.0	Sport Area	766 North Center Street. Eastview Little League, on the north edge of the northern baseball field.	Traffic on Front Street and distant traffic on SR 47.	Mostly noise from trucks on Front Street.
ST-4	11/7/2017	12:23 PM	20 minutes	61.2	Dog Park	700 Front Street. Knoll Hill Dog Park.	Traffic on on-ramp, Front Street, and SR 47.	None
ST-5	11/7/2017	12:23 PM	20 minutes	74.8	POLA Parking	POLA parking area near West Basin Container Terminal Gate 2, near Front Street. At the south end of the parking lot.	Trucks idling and starting.	Trucks idling and moving slowly and some POLA equipment noise.
ST-6	11/7/2017	12:23 PM	20 minutes	70.7	POLA Parking	POLA parking area near West Basin Container Terminal Gate 2, near Front Street. At the north end of the parking lot.	Heavy trucks queuing and idling, heavy truck traffic, and refrigerated containers in the cargo area.	None
ST-7	11/7/2017	9:49 AM	20 minutes	58.3	Residential	616 Mesa Street, in the backyard of the residence.	Traffic on SR 47.	8.3-foot existing wall at the north edge of the backyard.
ST-8	11/7/2017	9:49 AM	20 minutes	59.6	Residential	352 Amar Street, in the backyard of the residence.	Traffic on SR 47.	7.5-foot existing wall at the north edge of the backyard.
ST-9	11/7/2017	9:49 AM	20 minutes	59.0	Residential	537 Center Street, adjacent to the backyard of the residence.	Traffic on SR 47 and SR 47 ramps.	None
ST-10	11/7/2017	10:38 AM	20 minutes	50.7	Residential	247 Amar Street. behind the residence.	Traffic on SR 47.	Bird noise.
ST-11	11/7/2017	10:38 AM	20 minutes	56.7	Residential	203 Amar Street, in the backyard of the residence.	Distant traffic on SR 47.	Wind and bird noise. Occasional traffic on Amar Street.
ST-12	11/7/2017	10:38 AM	20 minutes	59.9	Residential	604 Palos Verdes Street, behind the residence.	Traffic on SR 47, SR 47 ramp, and Harbor Boulevard.	None
ST-13	11/7/2017	11:22 AM	20 minutes	66.8	Residential	661 Harbor Boulevard, at the pool area of Samoan Sea Apartments.	Traffic on Harbor Boulevard, SR 47, and SR 47 ramps.	None

Table 2.14-3: Short-Term Ambient Noise Monitoring Results

Monitor No.	Date	Start Time	Duration	dBA L_{eq}	Land Use	Location Description	Noise Source	Comments
ST-14	11/7/2017	11:22 AM	20 minutes	68.5	Fountains	199 Regan Street, Fanfare Fountain Metro Bike Share, near the northernmost set of benches.	Traffic on SR 47, SR 47 ramps, and Harbor Boulevard.	None
ST-15	11/7/2017	11:22 AM	20 minutes	67.8	Church/Commercial/ Light Industrial	435 North Harbor Boulevard, in front of the businesses.	Traffic on SR 47 and Harbor Boulevard.	Elevation higher than Harbor Boulevard.

Source: *Noise Study Report* (April 2018).
dBA = A-weighted decibels
SR 47 = State Route 47
L_{eq} = equivalent continuous sound level
POLA = Port of Los Angeles real property

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LEGEND

- Long-Term Monitoring Locations
- Short-Term Monitoring Locations
- Modeled Receptors
- Existing Right-of-Way
- Existing Wall

0 87.5 175
FEET

SOURCE: Google Aerial (2016); AECOM (10/2017)

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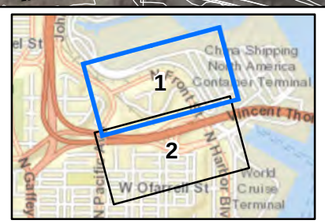


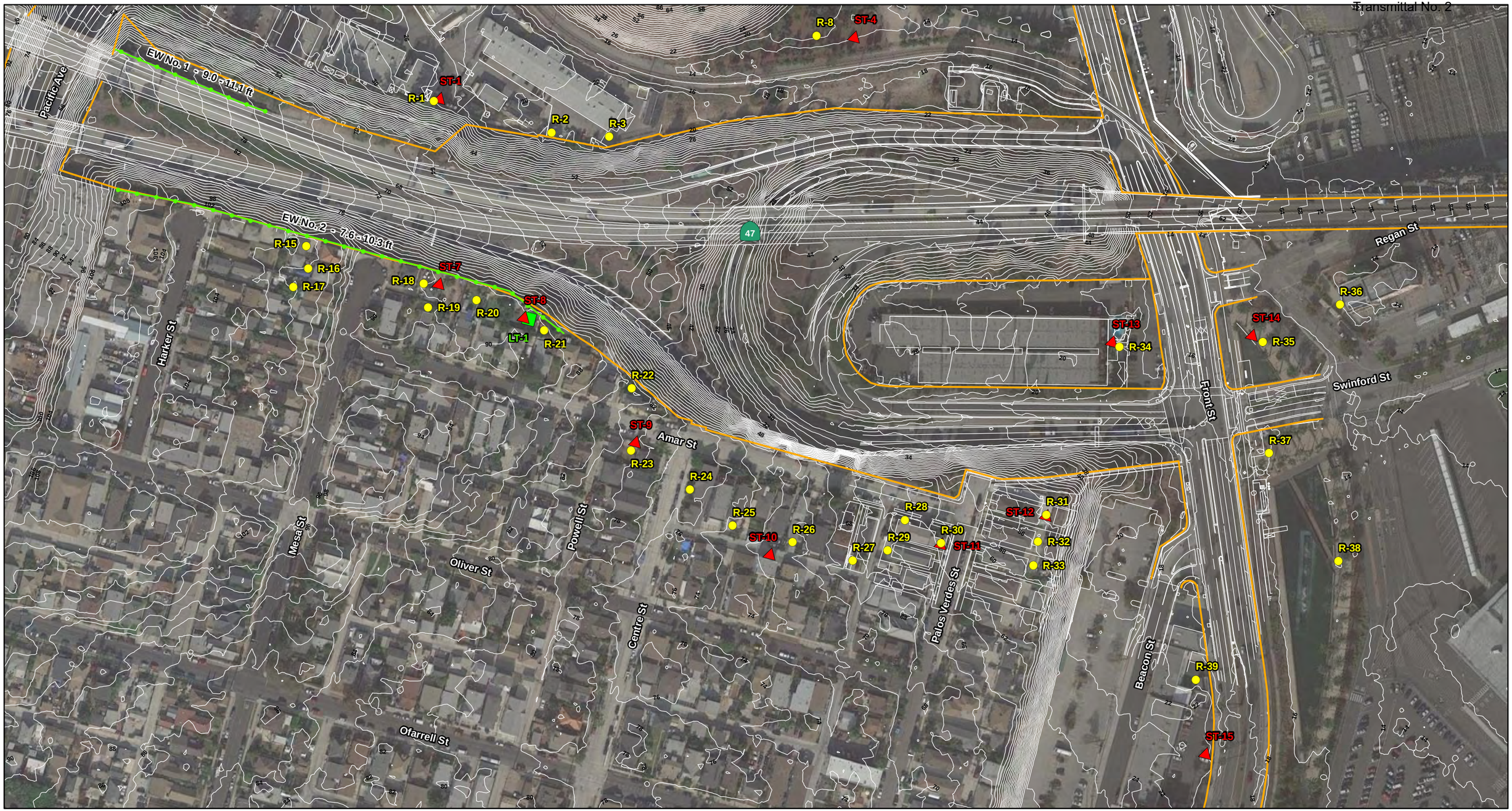
FIGURE 2.14-1
Page 1 of 2

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Monitoring and Modeled Receptor Locations

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EA No. 07-31850

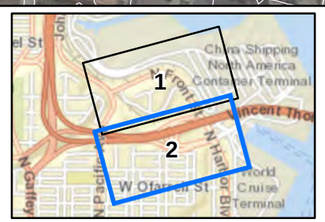
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LEGEND

- Long-Term Monitoring Locations
- Short-Term Monitoring Locations
- Modeled Receptors
- Existing Right-of-Way
- Existing Wall

0 87.5 175
FEET



SOURCE: Google Aerial (2016); AECOM (10/2017)

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FIGURE 2.14-1
Page 2 of 2

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Monitoring and Modeled Receptor Locations

07-LA-47 PM 0.3/0.8
EA No. 07-31850

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Long-Term Monitoring

A long-term traffic noise level measurement was conducted to document the peak traffic noise hour. Long-term ambient noise monitoring was conducted using a Larson Davis Model 720 Type 2 sound level meter at one representative location in the project area.

The long-term noise level measurement at LT-1 was performed at 352 Amar Street from 10:00 a.m. on Tuesday, November 7, 2017, to 10:00 a.m. on Wednesday, November 8, 2017. Table 2.14-4 shows that traffic noise peaks during the 6:00 a.m. and 7:00 am hour at LT-1. Figure 2.14-1 above, shows the long-term noise monitoring locations.

2.14.2.3 Existing Noise Levels

Existing traffic noise levels for all 39 receptor locations were determined with existing walls using the worst-case traffic operations (prior to speed degradation) or the existing peak-hour traffic volumes, whichever is lower. Existing traffic volumes on SR 47 and Front Street/Harbor Boulevard were obtained from the *Draft Traffic Study Report* (AECOM 2018). Table 2.14-5 shows the results of the existing traffic noise modeling. Currently, of the 39 modeled receptor locations, 1 receptor approaches or exceeds the NAC. Figure 2.14-1 previously provided above shows the locations of the modeled receptors.

2.14.3 Environmental Consequences

The proposed project is considered a Type 1 project because it would use federal aid to substantially alter the horizontal alignment of a highway. A noise analysis is required for all Type 1 projects. Therefore, noise impacts of the Build Alternative are analyzed below.

2.14.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Two types of short-term noise impacts would occur during proposed project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for grading and construction activities would be moved on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. A high single-event noise exposure potential at a level of 75 dBA maximum instantaneous noise level (L_{max}) from trucks

Table 2.14-4: Long-Term 24-Hour Noise Level Measurement Results at 352 Amar Street, San Pedro, CA (LT-1)

	Start Time	Date	Noise Level (dBA L_{eq})[1]
1	10:00 AM	11/7/2017	58
2	11:00 AM	11/7/2017	59
3	12:00 PM	11/7/2017	59
4	1:00 PM	11/7/2017	59
5	2:00 PM	11/7/2017	60
6	3:00 PM	11/7/2017	60
7	4:00 PM	11/7/2017	62
8	5:00 PM	11/7/2017	61
9	6:00 PM	11/7/2017	62
10	7:00 PM	11/7/2017	61
11	8:00 PM	11/7/2017	59
12	9:00 PM	11/7/2017	59
13	10:00 PM	11/7/2017	58
14	11:00 PM	11/7/2017	58
15	12:00 AM	11/8/2017	58
16	1:00 AM	11/8/2017	58
17	2:00 AM	11/8/2017	58
18	3:00 AM	11/8/2017	54
19	4:00 AM	11/8/2017	55
20	5:00 AM	11/8/2017	60
21	6:00 AM	11/8/2017	631
22	7:00 AM	11/8/2017	63
23	8:00 AM	11/8/2017	61
24	9:00 AM	11/8/2017	61

Source: *Noise Study Report* (April 2018).
Note: Refer to Figure 2.14-1 (sheet 2 of 2), above.
[1] **Bold** numbers represent the peak traffic noise hour.
dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels

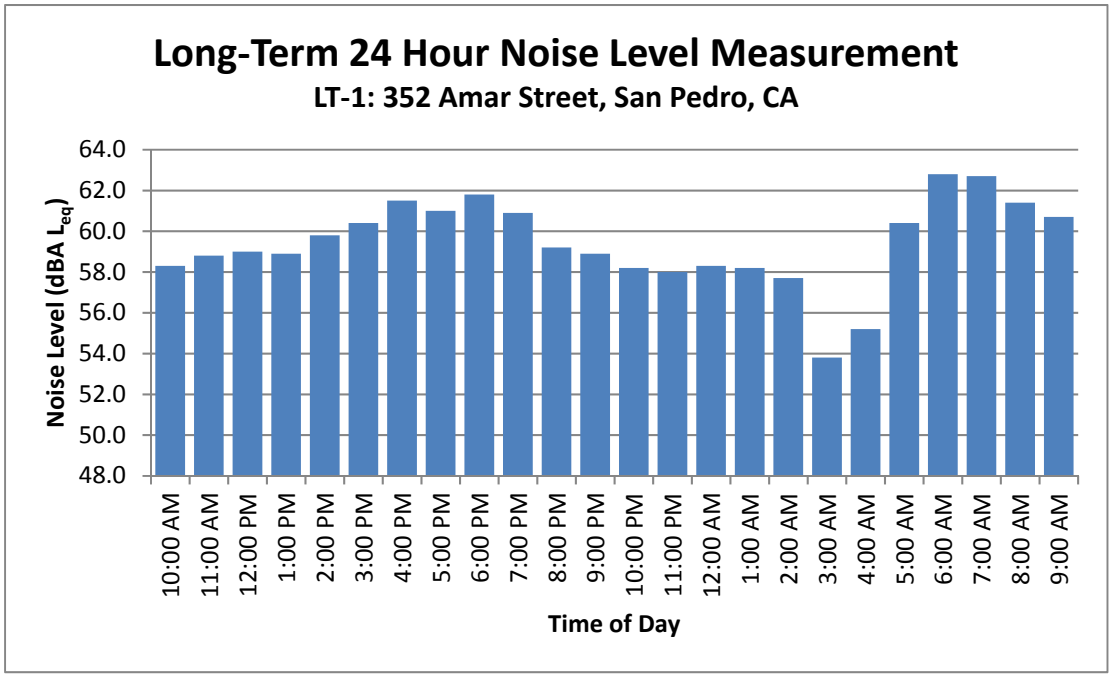


Table 2.14-5: Predicted Future Noise Level and Noise Barrier Analysis

Receptor No.	Existing Wall No.	Noise Barrier No.	Existing Noise Level dBA $L_{eq}(h)$[1]	Future Worst-Hour Noise Levels, dBA $L_{eq}(h)$																										
				Design Year (2045) Noise Level				Activity Category (NAC)[2]	Impact Type[3]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[5]																				
										6 feet			8 feet			10 feet			12 feet			14 feet			16 feet					
				No Build Alternative dBA L_{eq}[1]	Build Alternative dBA L_{eq}[1]	Build Alternative Minus No Build Alternative	Build Alternative Minus Existing Conditions			$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR
R-1		NB No. 1	59/39[6]	67/47	67/47	0	8	D (52)	--	66	1	0	66	1	0	66	1	0	66	1	0	66	1	0	66	1	0			
R-2		NB No. 1	61	70	70	0	9	D	--	69	1	0	68	2	0	68	2	0	68	2	0	68	2	0	68	2	0			
R-3		NB No. 1	61	70	69	-1	8	D	--	67	2	0	66	3	0	66	3	0	65	4	0	65	4	0	65	4	0			
R-4		NB No. 1	62	**68**	**68**	0	6	B (67)	A/E	**68**	0	0	**68**	0	0	**68**	0	0	**67**	1	0	**67**	1	0	**67**	1	0			
R-5		NB No. 1	62	**68**	**69**	1	7	C (67)	A/E	**69**	0	0	**69**	0	0	**68**	1	0	**68**	1	0	**68**	1	0	**68**	1	0			
R-6		NB No. 1	62	**68**	**68**	0	6	C (67)	A/E	**68**	0	0	**68**	0	0	**68**	0	0	**68**	0	0	**68**	0	0	**68**	0	0			
R-7		NB No. 1	60	**66**	**67**	1	7	C (67)	A/E	**66**	1	0	**66**	1	0	**66**	1	0	**66**	1	0	**66**	1	0	**66**	1	0			
R-8			64	72	--[8]	--	--	C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-9			63	71	--[8]	--	--	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-10			65	73	72	-1	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-11			62	69	69	0	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-12			59	66	66	0	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-13			57	64	64	0	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-14			52	58	58	0	6	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-15	EW No. 2	NB No. 3	60	**66**	**67**	1	7	B (67)	A/E	--	--	--	--	--	--	**66**	1	0	65	2	0	64	3	0	63	4	0			
R-16	EW No. 2	NB No. 3	59	65	65	0	6	B (67)	--	--	--	--	--	--	--	65	0	0	64	1	0	64	1	0	63	2	0			
R-17	EW No. 2	NB No. 3	58	64	64	0	6	B (67)	--	--	--	--	--	--	--	64	0	0	64	0	0	63	1	0	63	1	0			
R-18	EW No. 2	NB No. 3	58	65	65	0	7	B (67)	--	--	--	--	--	--	--	64	1	0	63	2	0	63	2	0	62	3	0			
R-19	EW No. 2	NB No. 3	55	62	62	0	7	B (67)	--	--	--	--	--	--	--	61	1	0	60	2	0	60	2	0	59	3	0			
R-20	EW No. 2	NB No. 3	60	**66**	**67**	1	7	B (67)	A/E	--	--	--	**66**	1	0	65	2	0	64	3	0	64	3	0	63	4	0			
R-21	EW No. 2	NB No. 3	61	**67**	**67**	0	6	B (67)	A/E	**67**	0	0	**67**	0	0	65	2	0	64	3	0	63	4	0	62	5	2			
R-22		NB No. 3	**67**	**73**	**73**	0	6	B (67)	A/E	**68**	5	3	63	10	3	62	11	3	61	12	3	60	13	3	59	14	3			
R-23		NB No. 3	60	**66**	**66**	0	6	B (67)	A/E	64	2	0	64	2	0	63	3	0	63	3	0	63	3	0	63	3	0			
R-24			53	60	60	0	7	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-25			46	53	53	0	7	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2.14-5: Predicted Future Noise Level and Noise Barrier Analysis

Receptor No.	Existing Wall No.	Noise Barrier No.	Existing Noise Level dBA $L_{eq}(h)$[1]	Future Worst-Hour Noise Levels, dBA $L_{eq}(h)$																							
				Design Year (2045) Noise Level				Activity Category (NAC)[2]	Impact Type[3]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[5]																	
										6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
				No Build Alternative dBA L_{eq}[1]	Build Alternative dBA L_{eq}[1]	Build Alternative Minus No Build Alternative	Build Alternative Minus Existing Conditions			$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR	$L_{eq}(h)$[1]	I.L.[4]	NBR
R-26		NB No. 6	46	53	53	0	7	B (67)	--	53	0	0	53	0	0	53	0	0	53	0	0	52	1	0	52	1	0
R-27		NB No. 6	51	57	57	0	6	B (67)	--	54	3	0	54	3	0	53	4	0	53	4	0	52	5	5	51	6	5
R-28		NB No. 6	62	**68**	**68**	0	6	B (67)	A/E	**68**	0	0	**68**	0	0	**67**	1	0	65	3	0	64	4	0	62	6	1
R-29		NB No. 6	57	63	63	0	6	B (67)	--	57	6	2	57	6	2	56	7	2	55	8	2	55	8	2	54	9	2
R-30		NB No. 6	58	64	64	0	6	B (67)	--	63	1	0	63	1	0	62	2	0	62	2	0	62	2	0	62	2	0
R-31		NB No. 7	61	**66**	**66**	0	5	B (67)	A/E	65	1	0	63	3	0	61	5	3	59	7	3	58	8	3	57	9	3
R-32		NB No. 7	57	64	64	0	7	B (67)	--	63	1	0	63	1	0	62	2	0	61	3	0	61	3	0	59	5	3
R-33		NB No. 7	56	63	63	0	7	B (67)	--	63	0	0	63	0	0	62	1	0	62	1	0	62	1	0	62	1	0
R-34		NB No. 4	64	**71**	**71**	0	7	B (67)	A/E	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0
R-35			65	72	71	-1	6	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-36			63	70	69	-1	6	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-37			64	71	71	0	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-38			59	66	66	0	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-39			61/36[7]	69/44	69/44	0	8	D (52)/F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Study Report* (April 2018).

1 Numbers in **bold** represent noise levels that approach or exceed the NAC.

2 Activity Categories without outdoor frequent human use areas were not evaluated against the NAC.

3 A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

4 Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

5 Shaded cells indicate the approximate existing wall heights.

6 The exterior-to-interior noise level reduction was assumed to be 20 dBA lower because the building type is light frame with ordinary windows.

7 The exterior-to-interior noise level reduction was assumed to be 25 dBA lower because the building type is masonry with single glazed windows.

8 This receptor was not analyzed under the Build Alternative because the existing land use activity at this location would discontinue.

A/E = Approach or Exceed
dBA = A-weighted decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level measured per hour in A-weighted decibels
IL = Insertion Loss
NAC = noise abatement criteria
NBR = Number of Benefited Receptors

passing at 50 ft would exist. However, the projected construction traffic would be minimal when compared to existing traffic volumes on SR 47 and other affected streets, and its associated long-term noise level change would not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would be less than substantial.

The second type of short-term noise impact is related to noise generated during roadway construction. Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and the noise levels in the project area as construction progresses. 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.

Table 2.14-6 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 ft between the equipment and a noise receptor.

Table 2.14-6: Typical Construction Equipment Noise Levels

Type of Equipment	Actual Maximum Sound Levels at 50 ft (dBA)
Backhoe	78
Crane	81
Dozer	82
Drill Rig Truck	79
Dump Truck	76
Excavator	81
Flat Bed Truck	74
Front End Loader	79
Generator	81
Impact Pile Driver	101
Jackhammer	89
Pickup Truck	75
Pneumatic Tools	85
Pumps	81
Roller	80
Scraper	84

Source: Federal Highway Administration. *Roadway Construction Noise Model* (2006).
dBA = A-weighted decibels
ft = foot/feet

Typical noise levels at 50 ft from an active construction area range up to 86 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest

construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery (e.g., backfillers, bulldozers, and front loaders). Earthmoving and compacting equipment includes compactors, scrapers, and graders.

The construction of the proposed project is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated to be between 75 and 84 dBA L_{max} at a distance of 50 ft from the active construction area for the grading phase. As seen in Table 2.14-6, the maximum noise level generated by each scraper is assumed to be approximately 84 dBA L_{max} at 50 ft from the scraper in operation. Each bulldozer would generate approximately 82 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks and pickup trucks is approximately 75 dBA L_{max} at 50 ft from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source. The worst-case composite noise level at the nearest residence during this phase of construction would be 86 dBA L_{max} (at a distance of 50 ft from an active construction area).

The closest sensitive receptors are within 50 ft of project construction areas for the Build Alternative. Sensitive receptor locations may be subject to short-term noise higher than 86 dBA L_{max} generated by construction activities along the project alignment. Project Feature PF-N-1 requires compliance with Caltrans' Standard Specifications Section 14-8.02 (2015) and would minimize construction noise impacts on sensitive land uses adjacent to the project site. The noise level from the Contractor's operations between the hours of 9:00 p.m. and 6:00 a.m. shall not exceed 86 dBA L_{max} at a distance of 50 ft.

PF-N-1 The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, "Noise Control." The nighttime noise level from the contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., will not exceed 86 A-weighted decibels (dBA) one-hour A weighted equivalent continuous sound level ($L_{eq}(h)$) at a distance of 50 feet. In addition, the contractor will equip all internal combustion engines with a manufacturer-recommended muffler and will not operate any internal combustion engine on the job site without the appropriate muffler.

No Build Alternative

The No Build Alternative would not result in the construction of improvements within the project area and, therefore, would not result in temporary noise effects.

2.14.3.2 Permanent Impacts

Potential long-term noise impacts associated with project operations are solely from traffic noise. Traffic noise was evaluated for the worst-case traffic condition. Using coordinates obtained from the topographic maps, a total of 39 receptor locations were evaluated in the noise model. Those locations were associated with existing single- and multifamily residences, classrooms and mechanic training facilities affiliated with a vocational school, a church, a sport park, a dog park, a police dog training facility, commercial uses, fountains, a bike sharing station, utilities, freight and parking areas of POLA, a vehicle inspection area, and light industrial uses.

Build Alternative (Preferred Alternative)

Future traffic noise levels for all 39 receptor locations were determined with existing walls using the worst-case traffic operations (prior to speed degradation) or the future (2045) peak-hour traffic volumes, whichever was lower. Table 2.14-5 above, show the existing, Future No Build, and Build Alternative traffic noise level results. The modeled future noise levels with the proposed project were compared to the modeled existing noise levels (after calibration) from TNM 2.5 to determine whether a substantial noise increase would occur. The modeled future noise levels were also compared to the NAC under Activity Categories B, C, D, and E to determine whether a traffic noise impact would occur. The proposed project would acquire the dog park and the police dog training facility. Therefore, Receptors R-8 and R-9 representing the dog park and police dog training facility, respectively, were not evaluated under the Build Alternative.

Traffic noise impacts occur when either of the following takes place: (1) if the traffic noise level at a sensitive receptor location is predicted to "approach or exceed" the NAC or (2) if the predicted traffic noise level is 12 dBA or more over its corresponding modeled existing noise level at the sensitive receptor locations analyzed. When traffic noise impacts occur, noise abatement measures must be considered. Of the 39 modeled receptors, 12 receptors under the Build Alternative would approach or exceed the NAC. No receptors would experience a substantial noise increase of 12 dBA or more over their corresponding existing noise levels.

The following receptor locations would be or would continue to be exposed to noise levels that approach or exceed the NAC under the Build Alternative.

- **Receptor R-4, R-5, R-6, and R-7:** These receptor locations represent an existing single-family residence and an existing sports park located along Viewland Place and Center Street on the westbound side of SR 47, between Pacific Avenue and Front Street. No existing walls shield these uses. Noise Barrier (NB) No. 1 was modeled along the edge of the shoulder on the westbound SR 47 on-ramp to shield these uses. NB No. 2 was modeled separately at an alternate location along the private property line to shield the residence and compare the effectiveness of the two noise barriers.
- **Receptor R-15, R-20, R-21, R-22, and R-23:** These receptor locations represent existing single-family residences located along Mesa Street and Amar Street on the eastbound side of SR 47, between Pacific Avenue and Harbor Boulevard. An existing 7.6 ft to 10.3 ft high wall (EW No. 2) shields some of the residences from traffic noise. Three noise barriers were evaluated separately to shield these receptors and to compare their effectiveness. NB No. 3 was modeled along the State right-of-way and the private property line on the eastbound side of SR 47 to shield these residences. NB No. 3a was modeled separately as a shorter barrier length, along the private property line on the eastbound side of SR 47 to shield residences representing Receptors R-22 and R-23. NB No. 367 was modeled separately as a continuous barrier, along the private property line and State right-of-way on the eastbound side of SR 47 to shield residences representing Receptors R-22 and R-23.
- **Receptors R-28:** This receptor location represents existing multifamily residences located along Amar Street on the eastbound side of SR 47, between Pacific Avenue and Harbor Boulevard. No existing walls shield this residence. Two noise barriers were evaluated separately to shield this receptor and to compare their effectiveness. NB No. 6 was modeled along the State right-of-way on the eastbound side of SR 47 to shield residences representing Receptor R-28. NB No. 367 was modeled separately as a continuous barrier, along the private property line and State right-of-way on the eastbound side of SR 47 to shield residences representing Receptor R-28.
- **Receptors R-31:** This receptor location represents existing multifamily residences located along Palos Verdes Street on the eastbound side of SR 47, between Pacific Avenue and Harbor Boulevard. No existing walls shield this residence. Two noise barriers were evaluated separately to shield this receptor and

to compare their effectiveness. NB No. 7 was modeled along the private property line to shield this residence. NB No. 367 was modeled separately as a continuous barrier, along the private property line and State right-of-way on the eastbound side of SR 47 to shield this residence.

- **Receptor R-34:** This receptor location represents the outdoor use area associated with existing multifamily residences located along Harbor Boulevard on the eastbound side of SR 47, between the Harbor Boulevard eastbound loop on-ramp and Harbor Boulevard. No existing walls shield the outdoor use area associated with the multifamily residences. Two noise barrier locations were evaluated separately to shield these receptors and to compare the effectiveness of the two barriers. NB No. 4 was modeled along the edge of the shoulder on the eastbound side of SR 47 to shield the outdoor use area associated with existing multifamily residences. NB No. 5 was modeled separately at an alternate location along the State right-of-way on the eastbound side of SR 47 to shield the outdoor use area associated with existing multifamily residences. Although traffic on Harbor Boulevard is a major noise source, a noise barrier located along Harbor Boulevard is not feasible due to driveway access onto Harbor Boulevard.

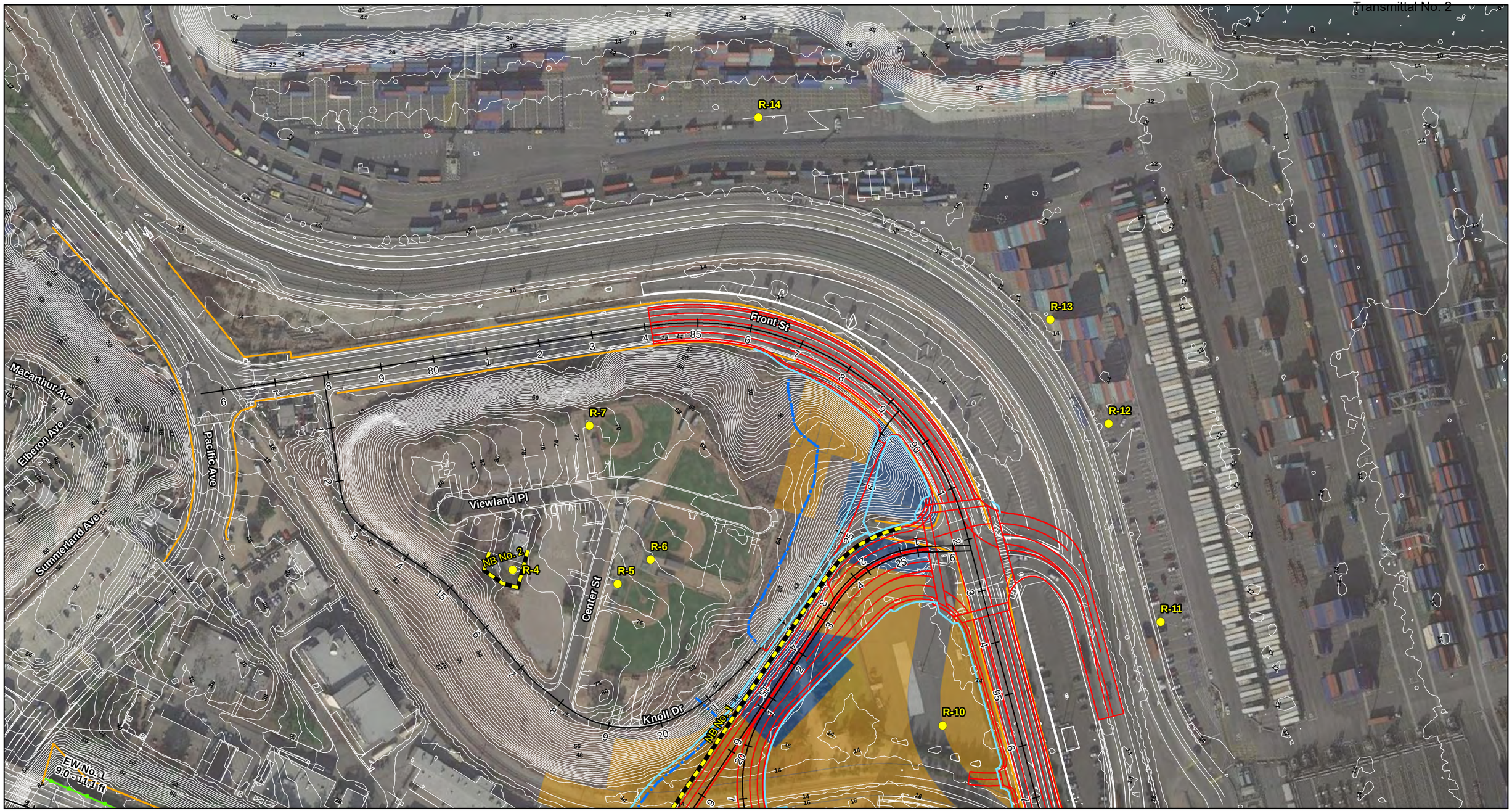
Noise Abatement Consideration

Noise abatement measures, such as noise barriers, were considered to shield receptors within the project area that would become or would continue to be exposed to traffic noise levels approaching or exceeding the NAC. All properties requiring abatement consideration are within Activity Categories B and C (67 dBA L_{eq} NAC). Noise barriers were analyzed for each of these receptor locations. Depending on the location of the potential barrier and existing barrier height, noise barrier heights from 6 to 16 ft at 2 ft increments were analyzed. Figure 2.14-2 shows the locations of the modeled noise barriers for the Build Alternative and Figure 2.14-3 shows the location of NB No. 367.

The following noise barriers were analyzed to shield receptor locations that would be exposed to traffic noise levels approaching or exceeding the NAC for the Build Alternative and are summarized in Table 2.14-5 above, and Table 2.14-7 for the Alternative Barrier Locations below:

- **NB No. 1:** A 1,110 ft long barrier along the edge of the shoulder on the westbound side of SR 47 was analyzed to shield Receptors R 4, R-5, R-6, and R-7.
- **NB No. 2:** As an alternative to NB No. 1, a 181 ft long barrier along the private property line on the westbound side of SR 47 was analyzed to shield Receptor R-4.

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LEGEND

- Modeled Receptors*
- Proposed Improvements
- Existing Right-of-Way
- Proposed Right-Of-Way
- Existing Wall
- Grading Limits
- Modeled Noise Barriers

Property Acquisitions

- Full
- Partial

0 87.5 175
FEET

*Receptors R-8 and R-9 are not shown because the properties would be acquired.

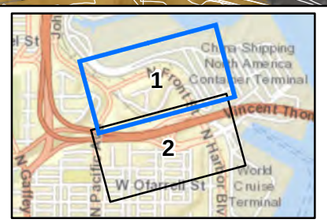


FIGURE 2.14-2
Page 1 of 2

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Modeled Noise Barriers and Receptor Locations for Build Alternative

07-LA-47 PM 0.3/0.8
EA No. 07-31850

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EW No. 1 - 9.0 - 11.1 ft
EW No. 2 - 7.6 - 10.3 ft
NB No. 1
NB No. 3
NB No. 3a
NB No. 4
NB No. 5
NB No. 6
NB No. 7
R-1
R-2
R-3
R-15
R-16
R-17
R-18
R-19
R-20
R-21
R-22
R-23
R-24
R-25
R-26
R-27
R-28
R-29
R-30
R-31
R-32
R-33
R-34
R-35
R-36
R-37
R-38
R-39
Pacific Ave
Harker St
Mesa St
Oliver St
Powell St
Centre St
Amar St
Ofarrell St
Palos Verdes St
Beacon St
Front St
Swinford St
Regan St
47

LEGEND

- Modeled Receptors*
- Proposed Improvements
- Existing Right-of-Way
- Proposed Right-Of-Way
- Existing Wall
- Grading Limits
- Modeled Noise Barriers

Property Acquisitions

- Full
- Partial

0 87.5 175
FEET

*Receptors R-8 and R-9 are not shown because the properties would be acquired.

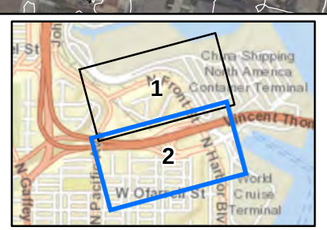


FIGURE 2.14-2
Page 2 of 2

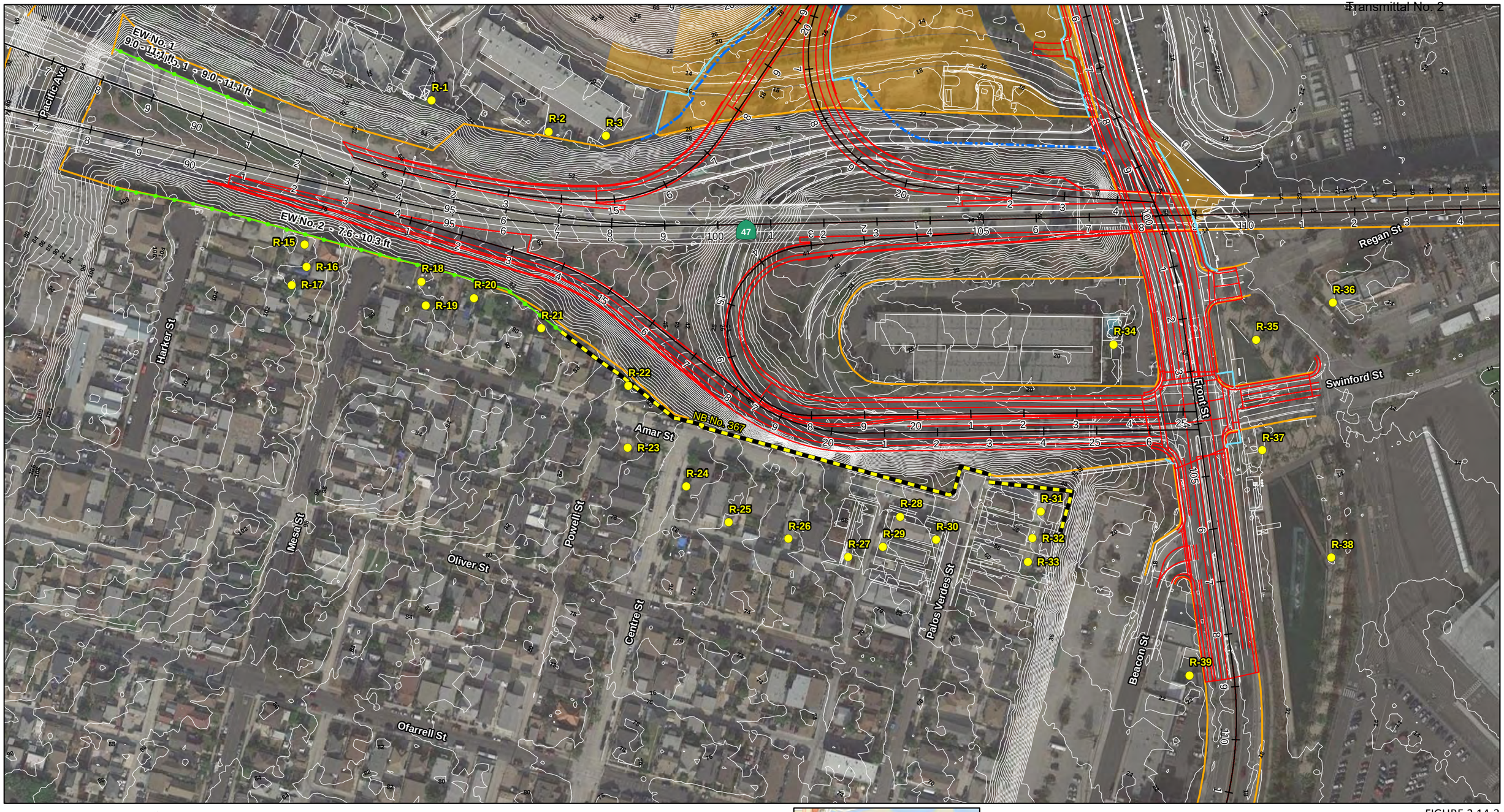
SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Modeled Noise Barriers and Receptor Locations for Build Alternative

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EA No. 07-31850

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LEGEND

- Modeled Receptors*
- Proposed Improvements
- Existing Right-of-Way
- Proposed Right-Of-Way
- Existing Wall
- Grading Limits
- Modeled Noise Barriers

Property Acquisitions

- Full
- Partial

0 87.5 175
FEET

*Receptors R-8 and R-9 are not shown because the properties would be acquired.



FIGURE 2.14-3

SR-47/ Vincent Thomas Bridge and
Front Street/Harbor Boulevard
Interchange Reconfiguration

Modeled Noise Barriers and Receptor Locations for Build Alternative - NB No. 367

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EA No. 07-31850

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Table 2.14-7: Predicted Future Noise Level and Noise Barrier Analysis—Alternative Barrier Locations

Receptor No.	Existing Wall No.	Noise Barrier No.	Existing Noise Level, dBA $L_{eq}(h)$[1]	Future Worst-Hour Noise Levels, dBA $L_{eq}(h)$																							
				Design Year (2045) Noise Level				Activity Category (NAC)[2]	Impact Type	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)																	
										6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
				No Build Alternative dBA L_{eq}[1]	Build Alternative dBA L_{eq}[1]	Build Alternative Minus No Build Alternative	Build Alternative Minus Existing Conditions			$L_{eq}(h)$[1]	I.L.[3]	NBR	$L_{eq}(h)$[1]	I.L.[3]	NBR	$L_{eq}(h)$[1]	I.L.[3]	NBR	$L_{eq}(h)$[1]	I.L.[3]	NBR	$L_{eq}(h)$[1]	I.L.[3]	NBR	$L_{eq}(h)$[1]	I.L.[3]	NBR
R-4		NB No. 2	62	**68**	**68**	0	6	B (67)	A/E	**67**	1	0	63	5	1	61	7	1	59	9	1	58	10	1	56	12	1
R-22		NB. No 3a	**67**	**73**	**73**	0	6	B (67)	A/E	**68**	5	3	63	10	3	62	11	3	61	12	3	60	13	3	59	14	3
R-23		NB. No 3a	60	**66**	**66**	0	6	B (67)	A/E	63	3	0	63	3	0	63	3	0	63	3	0	63	3	0	63	3	0
R-34		NB No. 5	64	**71**	**71**	0	7	B (67)	A/E	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0	**71**	0	0
R-21	EW No. 2	NB No. 367	61	**67**	**67**	0	6	B (67)	A/E	**67**	0	0	**67**	0	0	**67**	0	0	**67**	0	0	**67**	0	0	**67**	0	0
R-22		NB No. 367	**67**	**73**	**73**	0	6	B (67)	A/E	**68**	5	3	63	10	3	62	11	3	61	12	3	60	13	3	59	14	3
R-23		NB No. 367	60	**66**	**66**	0	6	B (67)	A/E	63	3	0	62	4	0	61	5	1	60	6	1	59	7	1	59	7	1
R-24		NB No. 367	53	60	60	0	7	B (67)	--	57	3	0	56	4	0	56	4	0	55	5	5	55	5	5	54	6	5
R-25		NB No. 367	46	53	53	0	7	B (67)	--	53	0	0	53	0	0	53	0	0	52	1	0	52	1	0	52	1	0
R-26		NB No. 367	46	53	53	0	7	B (67)	--	52	1	0	52	1	0	52	1	0	51	2	0	51	2	0	51	2	0
R-27		NB No. 367	51	57	57	0	6	B (67)	--	54	3	0	54	3	0	53	4	0	52	5	5	52	5	5	51	6	5
R-28		NB No. 367	62	**68**	**68**	0	6	B (67)	A/E	**68**	0	0	**68**	0	0	**67**	1	0	65	3	0	63	5	1	62	6	1
R-29		NB No. 367	57	63	63	0	6	B (67)	--	57	6	2	56	7	2	55	8	2	55	8	2	54	9	2	54	9	2
R-30		NB No. 367	58	64	64	0	6	B (67)	--	63	1	0	62	2	0	61	3	0	60	4	0	59	5	1	59	5	1
R-31		NB No. 367	61	**66**	**66**	0	5	B (67)	A/E	65	1	0	63	3	0	61	5	3	59	7	3	58	8	3	57	9	3
R-32		NB No. 367	57	64	64	0	7	B (67)	--	63	1	0	63	1	0	62	2	0	61	3	0	61	3	0	59	5	3
R-33		NB No. 367	56	63	63	0	7	B (67)	--	63	0	0	63	0	0	62	1	0	62	1	0	61	2	0	61	2	0

Source: *Noise Study Report* (April 2018).

1 Numbers in **bold** represent noise levels that approach or exceed the NAC.

2 Activity Categories without outdoor frequent human use areas were not evaluated against the NAC.

3 Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed
dBA = A-weighted decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level measured per hour in A-weighted decibels
IL = Insertion Loss
NAC = noise abatement criteria
NBR = Number of Benefited Receptors

- **NB No. 3:** An 872 ft long barrier along the State right-of-way and the private property line on the eastbound side of SR 47 was analyzed to shield Receptors R-15, R-20, R-21, R-22, and R 23.
- **NB No. 3a:** A 267 ft long barrier along the private property line on the eastbound side of SR 47 was analyzed to shield residences represented by Receptors R-22 and R-23.
- **NB No. 367:** A 1,168 ft long barrier along the private property line and State right-of-way on the eastbound side of SR 47 was analyzed to shield Receptors R-22, R-23, R-28, and R-31.
- **NB No. 4:** A 632 ft long barrier along the edge of shoulder on the eastbound side of SR 47 was analyzed to shield Receptor R 34.
- **NB No. 5:** As an alternative to NB No. 4, a 509 ft long barrier along the State right-of-way on the eastbound side of SR 47 was analyzed to shield Receptor R 34.
- **NB No. 6:** A 292 ft long barrier along the State right-of-way on the eastbound side of SR 47 was analyzed to shield Receptor R-28.
- **NB No. 7:** A 239 ft long barrier along the private property line on the eastbound side of SR 47 was analyzed to shield Receptor R-31.

Feasibility and Reasonable Allowance

Section 3 of the Protocol states that a minimum noise reduction of 5 dBA must be achieved at the impacted receptors for the proposed noise abatement measure to be considered feasible. Greater noise reductions are encouraged if they can be reasonably achieved. Feasibility may also be restricted by the following factors: (1) topography, (2) access requirements for driveways, (3) presence of local cross streets, (4) underground utilities, (5) other noise sources in the area, and (6) safety considerations.

Table 2.14-8, which summarizes the feasibility of the modeled noise barriers, lists the noise barrier heights, approximate lengths, highest noise attenuation, number of benefited units/receptors, total reasonable allowance, noise barrier locations, beginning and ending station numbers, and beginning and ending top of wall elevation under the Build Alternative.

Of the nine modeled noise barriers evaluated for the Build Alternative, six noise barriers were determined to be feasible. NB Nos. 1, 4, and 5 were determined to be not feasible because the noise barriers were not capable of reducing noise levels by 5 dBA or more.

Table 2.14-8: Summary of Feasible Noise Barriers for the Build Alternative

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Highest Noise Attenuation (dBA)	Number of Benefited Receptors/Units[1]	Total Reasonable Allowance[2]	Noise Barrier Location	Noise Barrier Station Number		Top of Wall Elevation	
							Begin	End	Begin	End
2	8	181	5	1	$95,000	PL	80+20	81+10	88.08	86.69
	10	181	7	1	$95,000		80+20	81+10	90.08	88.69
	12	181	9	1	$95,000		80+20	81+10	92.08	90.69
	14	181	10	1	$95,000		80+20	81+10	94.08	92.69
	16	181	12	1	$95,000		80+20	81+10	96.08	94.69
3	6	872	5	3	$285,000	ROW/PL	91+60	99+00	108.19	84.46
	8	872	10	3	$285,000		91+60	99+00	110.19	86.46
	10	872	11	3	$285,000		91+60	99+00	112.19	88.46
	12	872	12	3	$285,000		91+60	99+00	114.19	90.46
	14	872	13	3	$285,000		91+60	99+00	116.19	92.46
	16	872	14	5	$475,000		91+60	99+00	118.19	94.46
3a	6	267	5	3	$285,000	PL	97+20	99+00	93.29	84.46
	8	267	10	3	$285,000		97+20	99+00	95.29	86.46
	10	267	11	3	$285,000		97+20	99+00	97.29	88.46
	12	267	12	3	$285,000		97+20	99+00	99.29	90.46
	14	267	13	3	$285,000		97+20	99+00	101.29	92.46
	16	267	14	3	$285,000		97+20	99+00	103.29	94.46
367	6	1,168	6	5	$475,000	ROW/PL	97+00	105+00	93.29	62.00
	8	1,168	10	5	$475,000		97+00	105+00	95.29	64.00
	10	1,168	11	9	$855,000		97+00	105+00	97.29	66.00
	12	1,168	12	13	$1,805,000		97+00	105+00	99.29	68.00
	14	1,168	13	21	$1,995,000		97+00	105+00	101.29	70.00
	16	1,168	14	24	$2,280,000		97+00	105+00	103.29	72.00
6	6	292	6	2	$190,000	ROW	101+50	104+40	72.20	64.76
	8	292	6	2	$190,000		101+50	104+40	74.20	66.76
	10	292	7	2	$190,000		101+50	104+40	76.20	68.76
	12	292	8	2	$190,000		101+50	104+40	78.20	70.76
	14	292	8	7	$665,000		101+50	104+40	80.20	72.76
	16	292	9	8	$760,000		101+50	104+40	82.20	74.76

Table 2.14-8: Summary of Feasible Noise Barriers for the Build Alternative

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Highest Noise Attenuation (dBA)	Number of Benefited Receptors/Units[1]	Total Reasonable Allowance[2]	Noise Barrier Location	Noise Barrier Station Number		Top of Wall Elevation	
							Begin	End	Begin	End
7	10	239	5	3	$285,000	PL	105+00	106+50	66.90	57.42
	12	239	7	3	$285,000		105+00	106+50	68.90	59.42
	14	239	8	3	$285,000		105+00	106+50	70.90	61.42
	16	239	9	6	$570,000		105+00	106+50	72.90	63.42

Source: Noise Abatement Decision Report (December 2018).

[1] Number of receptors/units where the modeled barrier would attenuate noise by 5 dBA or more.

[2] Calculated by multiplying the number of benefited receptors by $95,000 (reasonable allowance per benefited receptor/unit).

[3] Denotes the minimum barrier height required to break the line-of-sight between the receptor and a truck exhaust stack.

dBA = A-weighted decibels
ft = foot/feet
PL = property line
ROW = right-of-way

Noise Barrier Reasonableness

The reasonableness of a noise barrier is determined by comparing the estimated cost of constructing the noise barrier against the total reasonable allowance. The total reasonable allowance is determined based on the number of benefited residences/receptors multiplied by the reasonable allowance per residence/receptor. Additionally, in accordance with the Caltrans Traffic Noise Analysis Protocol, each noise barrier must provide at least 7 dBA of noise reduction at one or more benefited residence/receptor to be considered reasonable. Therefore, if the estimated noise barrier construction cost exceeds the total reasonable allowance or was not predicted to provide at least 7 dBA of noise reduction at one or more benefited residences/receptors, the noise barrier is determined to be not reasonable. However, if the estimated noise barrier construction cost is less than the total reasonable allowance and is predicted to provide at least 7 dBA of noise reduction at one or more benefited residences/receptors, the noise barrier is determined to be reasonable.

The project engineer developed the estimated noise barrier construction cost for each barrier under each alternative. A summary of abatement information in Table 2.14 9 lists all the feasible noise barriers, along with their heights, approximate lengths, highest noise attenuation, number of benefited units/receptors, and total reasonable allowance per barrier under the Build Alternative. As shown in Table 2.14-9, Noise Barrier Nos. 2, 3a, 367, 6, and 7 under the Build Alternative were determined to be reasonable; however, NB No. 367 eliminates the need for NB Nos. 3a, 6, and 7. Measure N-2 requires the consideration of noise abatement in the form of noise barriers and would minimize operational noise impacts on sensitive land uses adjacent to the project site.

Noise barrier surveys were sent to the benefited receptors for the feasible and reasonable noise barriers identified in the NSR and NADR. Based on the Traffic Noise Analysis Protocol, for abatement located within State right-of-way, if more than 50 percent of the votes from responding benefited receptors oppose the abatement, the abatement will not be considered reasonable. Votes from property owners and non-owner-occupants of benefited receptors were surveyed. For owner-occupied dwelling units, the property owner gets one vote. For non-owner-occupied dwelling units, the renter gets 10 percent of one vote and the owner gets 90 percent of one vote.

Table 2.14-9 Summary of Abatement Key Information

Noise Barrier No.	Noise Barrier Location	Height (ft)	Approximate Length (ft)	Noise Attenuation Level (dBA)	Number of Benefited Receptors/ Units[1]	Total Reasonable Allowance	Without Right-of-Way Donation		With Right-of-Way Donation[2]	
							Estimated Construction Cost[3]	Reasonable?	Estimated Construction Cost[3]	Reasonable?
2	PL	8	181	5	1	$95,000	--[4]	No	--	No
		10	181	7	1	$95,000	$101,621	No	$71,937	Yes
		12	181	9	1	$95,000	$107,096	No	$77,412	Yes
		14	181	10	1	$95,000	$112,571	No	$82,887	Yes
		16	181	12	1	$95,000	$118,046	No	$88,362	Yes
3	ROW/PL	6	872	5	3	$285,000	--	No	--	No
		8	872	10	3	$285,000	$458,977	No	$380,497	No
		10	872	11	3	$285,000	$485,355	No	$406,875	No
		12	872	12	3	$285,000	$511,733	No	$433,253	No
		14	872	13	3	$285,000	$538,111	No	$459,631	No
		16	872	14	5	$475,000	$564,489	No	$486,009	No
3a	PL	6	267	5	3	$285,000	--	No	--	No
		8	267	10	3	$285,000	$117,921	Yes	$93,891	Yes
		10	267	11	3	$285,000	$125,997	Yes	$101,967	Yes
		12	267	12	3	$285,000	$134,074	Yes	$110,044	Yes
		14	267	13	3	$285,000	$142,151	Yes	$118,121	Yes
		16	267	14	3	$285,000	$150,228	Yes	$126,198	Yes
367	ROW/PL	6	1,168	6	5	$475,000	--	No	--	No
		8	1,168	10	5	$475,000	$925,928	No	$731,898	No
		10	1,168	11	9	$855,000	$961,260	No	$767,230	Yes
		12	1,168	12	19	$1,805,000	$996,592	Yes	$802,562	Yes
		14	1,168	13	21	$1,995,000	$1,031,924	Yes	$837,894	Yes
		16	1,168	14	24	$2,280,000	$1,067,256	Yes	$873,226	Yes
6	ROW	6	292	6	2	$190,000	--	No	--	--
		8	292	6	2	$190,000	--	No	--	--
		10	292	7	2	$190,000	$97,163	Yes	--	--
		12	292	8	2	$190,000	$105,996	Yes	--	--
		14	292	8	7	$665,000	$114,829	Yes	--	--
		16	292	9	8	$760,000	$123,662	Yes	--	--

Table 2.14-9 Summary of Abatement Key Information

Noise Barrier No.	Noise Barrier Location	Height (ft)	Approximate Length (ft)	Noise Attenuation Level (dBA)	Number of Benefited Receptors/ Units[1]	Total Reasonable Allowance	Without Right-of-Way Donation		With Right-of-Way Donation[2]	
							Estimated Construction Cost[3]	Reasonable?	Estimated Construction Cost[3]	Reasonable?
7	PL	10	239	5	3	$285,000	--	No	--	No
		12	239	7	3	$285,000	$602,187	No	$432,187	No
		14	239	8	3	$285,000	$609,417	No	$439,417	No
		16	239	9	6	$570,000	$616,646	No	$446,646	Yes

Source: Compiled by LSA Associates, Inc. (2018).

1 Number of receptors/units that are attenuated 5 dBA or more by the modeled barrier.

2 For noise barriers located along private property, the estimated noise barrier construction cost includes a scenario without right-of-way costs (with right-of-way donation) so that the property owner may donate their permanent easement to achieve reasonableness.

3 The estimated noise barrier construction cost information was provided by AECOM (2018c).

4 Shaded areas represent barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

dBA = A-weighted decibels ft = foot/feet
ROW = right-of-way PL = property line

For noise abatement to occur on private property, 100 percent of owners of property upon which the abatement is to be placed must support the proposed abatement. In the case of proposed noise abatement on private property, no response from a property owner, after a reasonable number of attempts, is considered a "no" vote.

Noise Barrier No. 2 is located solely on private property, and Noise Barrier No. 367 is located on both private property and public right-of-way.

On October 1, 2018, a noise barrier survey letter was delivered to the residents potentially benefitted by Noise Barrier Nos. 2 and 367. This survey requested each owner's opinion on whether or not he/she is in favor of a noise barrier. Residents were asked to respond by October 30, 2018.

Following the due date from the initial survey, the responses were tallied for each of the noise barriers. Because responses were not received from all residents, the City of Los Angeles Harbor Department followed up in person on November 26, 27, and 28, 2018, with the nonresponding property owners. As a result of responses collected for these surveys following the in-person visits, using the voting criteria, it was determined that none of the noise barriers will be built.

The preliminary noise abatement decision presented in this document is based on preliminary project alignments and profiles, which may be subject to change during the design phase. The final decision on noise abatement would be made upon completion of the project design.

Nonacoustical Factors Relating to Feasibility

Although noise barriers are not included as part of the design in the PA/ED phase, the final decision on noise abatement would be made upon completion of the project design. Therefore, the following nonacoustical factors relating to feasibility were considered for the reasonable noise barriers. These factors include: geometric standards, safety, maintenance, security, drainage, geotechnical considerations, and utility relocations. The nonacoustical factors relating to feasibility are addressed below for the feasible and reasonable noise barriers.

Nonacoustical factors relating to feasibility must be considered during the construction of noise barriers include: geometric standards, safety, maintenance, security, drainage, geotechnical considerations, and utility relocations. The

nonacoustical factors relating to feasibility for NB Nos. 2 and 367 are addressed below.

- **Geometric Standards:** NB Nos. 2 and 367 would not affect the geometric standards of adjacent roadways.
- **Safety:** NB Nos. 2 and 367 would not affect sight distance for vehicles or pedestrians.
- **Maintenance:** NB No. 367 are along Caltrans ROW and would require a temporary construction easement (TCE) and maintenance easements. Permanent easements would depend on eventual footing type of the noise barrier. NB No. 2 and the easterly portion of NB No. 367 would be on private property. Besides the TCE and maintenance easements, this portion would require a permanent easement for the entire noise barrier and footing and likely acquisition of the property between the wall and existing Caltrans ROW.
- **Security:** NB Nos. 2 and 367 would not change the security conditions of the site, therefore would not create potential security risks by providing cover for people or articles trying to remain out of sight.
- **Drainage:** NB Nos. 2 and 367 would not affect existing or proposed drainages because they would be situated along fence lines at the top of existing slopes.
- **Geotechnical Considerations:** All of NB No. 2 and most of NB No. 367 are proposed at existing grade in native soil. However, the easterly portion of NB No. 367, where it would wrap around the top of slope along a private residence, would pose unknown geotechnical risks. The existing slope appears to be unstable and its current condition would likely not support NB No. 367. Deep piles, retaining walls, re-grading, and stabilization of this slope would be required.
- **Utility Relocations:** No utility relocations are anticipated with NB Nos. 2 and 367, even though NB No. 367 would follow the fence line across from North Center Street, which wraps around several utility boxes.

No Build Alternative

Potential long-term noise effects under the No Build Alternative would be solely from traffic noise. Of the 39 modeled receptor locations, 12 receptors would continue to approach or exceed the NAC under the future No Build condition.

2.14.4 Avoidance, Minimization, and/or Mitigation Measures

Because Noise Barrier Nos. 2 and 367 were determined to not be reasonable based on public input from the benefited receptors, no avoidance, minimization, and/or mitigation measures are necessary.

BIOLOGICAL ENVIRONMENT

Wetlands and other waters are discussed in Section 2.16, Wetlands and Other Waters. As noted earlier in the introduction to Chapter 2, habitat suitability for threatened and endangered species in the Biological Study Area (BSA) was deemed low, and none were detected during biological surveys; therefore, the Build Alternative is not anticipated to impact any threatened or endangered species. As a result, this document does not include a Threatened and Endangered Species section.

2.15 Natural Communities

2.15.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

2.15.2 Affected Environment

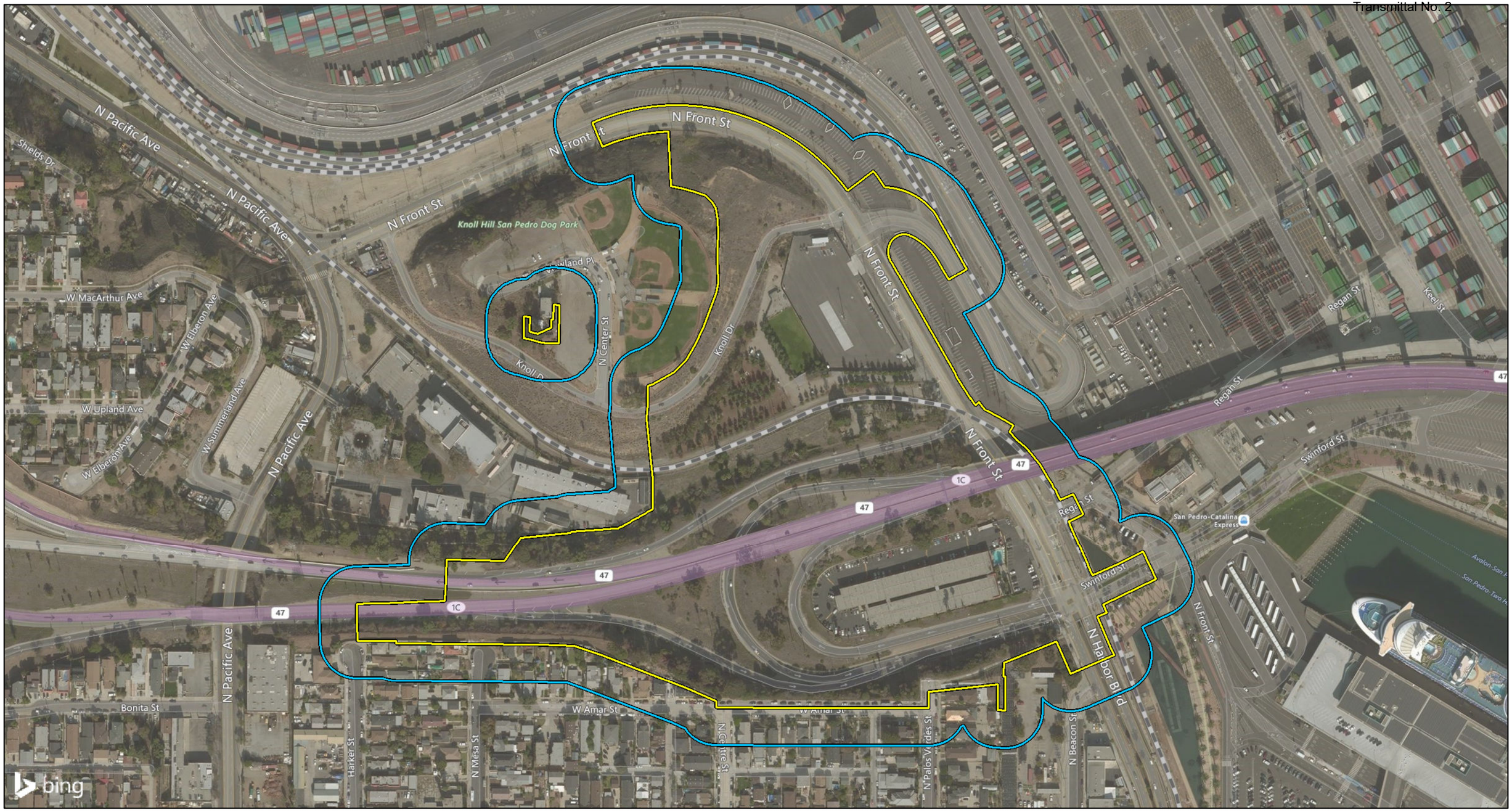
The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (March 2018) prepared for the proposed project.

2.15.2.1 Biological Study Area

The study area assessed for biological resources is referred to as the BSA. The BSA totals 52.51 acres and is shown on Figure 2.15.1. The BSA represents the area of potential direct and indirect project impacts to biological resources and includes the project area plus a 100-foot (ft) buffer (100 ft from the outer limits of the work area). The northern limit of the BSA is in the container terminal parking lot, north of Front Street. The BSA's southern terminus is south of the State Route (SR) 47 interchange area in a residential community.

The proposed project and the BSA are located within Los Angeles in mostly urban settings consisting of residential, recreation, transportation, commercial, and undeveloped land uses.

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LEGEND

- Project Location
- Biological Study Area (100 ft buffer)

0 125 250
FEET

SOURCE: Bing Maps (2015)

I:\AEM1602\GIS\MXD\LandUse\AerialPhoto.mxd (5/18/2018)

FIGURE 2.15-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Aerial Photo of the BSA

07-LA-47 PM 0.3/0.8

EA No. 07-31850

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2.15.2.2 Vegetation Communities

Vegetation communities and land cover types in the BSA include areas of ornamental landscaping, park area, and bare ground (disturbed/ruderal or barren).

Habitats are considered to be of special concern based on (1) federal, State, and/or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals occurring on site. There are no habitats or natural communities of concern within or immediately adjacent to the BSA. The BSA consists entirely of developed areas, with some ornamental and weedy vegetation, and has low biological value to native plant and wildlife species.

2.15.2.3 Wildlife Corridors and Movement

The highly developed nature of the BSA presents various impediments to wildlife movement, including roads, walls, fences, buildings, and lack of vegetative cover. Furthermore, there are no large open-space areas or designated significant ecological areas in proximity to the BSA. Mammals such as coyote, raccoon, opossum, and skunk have adapted to densely developed urban environments and may utilize urban streets as a movement corridor; however, there are no known wildlife movement corridors within the BSA or the immediate vicinity. Mature ornamental trees may serve as habitat linkages for urban-tolerant bird species.

2.15.3 Environmental Consequences

2.15.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

As described in Section 2.15.2, the BSA presents various impediments to wildlife movement and does not facilitate habitat connectivity. Additionally, there are no native habitats within or adjacent to the BSA. Furthermore, the Build Alternative would also include implementation of Project Feature PF-WQ-1 (Section 2.9), which would minimize potential indirect impacts to adjacent habitats resulting from general construction activities (including storm water and litter) through compliance with the Construction General Permit and implementation of project-specific best management practices (BMPs). Therefore, construction of the Build Alternative would not result in any substantial adverse temporary impacts to wildlife movement or habitats within or adjacent to the BSA.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in temporary impacts to wildlife movement.

2.15.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

As described in Section 2.15.2, SR-47 presents a barrier to wildlife movement and does not facilitate habitat connectivity. Additionally, there are no native habitats within or adjacent to the BSA. Furthermore, the Build Alternative would also include implementation of Project Features PF-WQ-3 through PF-WQ-5 (Section 2.9), which would minimize potential indirect impacts to adjacent habitats resulting from typical transportation pollutants through implementation of the California Department of Transportation (Caltrans) National Pollutant Discharge Elimination System (NPDES) Permit, Design Pollution Prevention BMPs (including preservation of existing vegetation and revegetation), and Treatment BMPs. Therefore, implementation of the Build Alternative is not expected to permanently affect wildlife movement or habitats within or adjacent to the BSA.

No Build Alternative

The No Build Alternative would not include the operation of any of the proposed project improvements. Therefore, the No Build Alternative would not result in permanent impacts to wildlife movement.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate project features and standardized measures as provided in Section 2.9, no adverse impacts to natural communities would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.16 Wetlands and Other Waters

2.16.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and

allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the California Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required

in tandem with a Section 404 permit request. Please see the Water Quality section (Section 2.9) for more details.

2.16.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (March 2018). The Biological Study Area (BSA) was surveyed on foot for both federal and State jurisdictional areas. A jurisdictional delineation was not deemed necessary because there were no areas of potential jurisdiction within the BSA.

The BSA is located along State Route (SR) 47 from North Pacific Avenue to North Harbor Boulevard. The BSA is within the Dominguez Channel Watershed, which encompasses approximately 70,000 square miles; approximately 26,600 acres of the watershed drain directly into the Los Angeles Harbor. The BSA encompasses the potential impact areas (temporary and permanent) for the Build Alternative, as well as a 100-foot (ft) buffer area to account for any potential indirect impacts to adjacent biological resources and potential jurisdictional features.

The BSA contains no drainage features subject to jurisdiction under Sections 404 and 401 of the CWA and Section 1602 of the California Fish and Game Code.

One drainage feature—a 3 ft wide, concrete-lined v-ditch—was identified at the toe of the slope on the west side of the westbound SR-47 off-ramp within the BSA. This manmade v-ditch was evaluated in the field to determine whether it would be considered subject to USACE, RWQCB, and/or CDFW jurisdiction. The v-ditch was constructed on dry land, has no evidence of flow, and does not replace a natural or historic drainage; therefore, it was determined to not be jurisdictional.

No wetlands, rivers, streams, or lakes are present within the BSA.

2.16.3 Environmental Consequences

No wetlands, rivers, streams, or lakes are present within the BSA. Additionally, with implementation of the Statewide Construction General Permit described in Project Feature PF-WQ-1 in Section 2.9.3.1, the proposed project would have no impacts on jurisdictional or nonjurisdictional waters. Therefore, no construction, permanent, or cumulative impacts would occur under the No Build Alternative or the Build Alternative (Preferred Alternative).

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project features and standardized measures described in Section 2.9, no adverse impacts to jurisdictional or nonjurisdictional waters would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.17 Plant Species

2.17.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). The proposed project is not anticipated to impact any species listed or proposed for listing as threatened or endangered as discussed earlier in the introduction to Chapter 2.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC), Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900–1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000–21177.

2.17.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (March 2018) prepared for the proposed project.

A literature review and records search were conducted to identify the existence or potential occurrence of sensitive or special-status plant species located within or in the vicinity of the Biological Study Area (BSA).

The results of the literature review indicated four plant species, which are federally and/or State-listed as endangered or threatened as potentially occurring in the BSA. However, habitat suitability for threatened or endangered species in the BSA was

deemed low, and none were detected during biological surveys. As a result, threatened and endangered species are not discussed further in this document.

The remaining special-status plant species identified in the records search as potentially occurring in or near the vicinity of the BSA are:

- Aphanisma (*Aphanisma blitoides*)
- Coulter's saltbush (*Atriplex coulteri*)
- South coast saltscale (*Atriplex pacifica*)
- Parish's brittlescale (*Atriplex parishii*)
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)
- Southern tarplant (*Centromadia parryi* ssp. *Australis*)
- Catalina crossosoma (*Crossosoma californicum*)
- Island green dudleya (*Dithyrea maritima*)
- Mesa horkelia (*Horkelia cuneate* var. *puberula*)
- Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)
- Sea dahlia (*Leptosyne maritima*)
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei*)
- Mud nama (*Nama stenocarpa*)
- Prostrate vernal pool navarretia (*Navarretia prostrata*)
- Coast woollyheads (*Nemacaulis denudata* var. *denudata*)
- Brand's star phacelia (*Phacelia stellaris*)
- Estuary seablite (*Suaeda esteroa*)
- San Bernardino aster (*Symphyotrichum defoliatum*)

In addition to the literature review, a general survey and habitat mapping were conducted on December 21, 2017, to characterize the general biological resources of the BSA and to ascertain the presence or absence of special-status plant species and the likelihood of their occurrence in or near the BSA. None of the special-status plant species listed above are expected to occur, or they have a low potential to occur, and none were observed or otherwise detected in the BSA at the time of the surveys. The BSA does not contain, nor is it adjacent to, suitable habitat for any special-status plant species identified in the literature search. The BSA is highly urbanized, with some ornamental and weedy vegetation, and has low biological value for native plant and wildlife species.

2.17.3 Environmental Consequences

2.17.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

The proposed project is expected to have no effect on any of the special-status plant species identified as potentially occurring within the project vicinity because none of the species were observed or otherwise detected during surveys of the BSA and no suitable habitat for them is present in the BSA (Table 2.17.1). The BSA is highly urbanized, with some ornamental and weedy vegetation, and has low biological value to native plant and wildlife species. Therefore, construction of the Build Alternative would not result in temporary impacts on special-status plant species.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in temporary impacts to any special-status plant species.

2.17.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

As noted above, the proposed project is expected to have no effect on any of the special-status plant species identified as potentially occurring within the vicinity of the proposed project because none of the species were observed or otherwise detected during surveys of the BSA and no suitable habitat is present in the BSA for these species (Table 2.17.1). Therefore, no permanent impacts would occur under the Build Alternative.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in permanent impacts to any special-status plant species.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

Table 2.17.1: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur Within and in the Vicinity of the Biological Study Area

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Plants						
Aphanisma blitoides	Aphanisma	US: – CA:1B	Sandy or clay soils on slopes or bluffs near the ocean, usually in coastal bluff scrub, coastal dunes, or coastal scrub, below 1,000 ft in elevation.	March–June	A	Not expected to occur; prior extensive impacts to project area, and species occurrences within vicinity of BSA are associated with bluffs on immediate coast.
Atriplex coulteri	Coulter's saltbush	US: – CA: 1B	Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands, usually on ocean bluffs and ridge tops in alkaline or clay soils, from 10 to 1,510 ft in elevation.	March–October	A	Not expected to occur; prior extensive impacts to project area and no known occurrences within vicinity of BSA.
Atriplex pacifica	South Coast saltscale	US: – CA: 1B	Annual herb. Alkali soils in coastal sage scrub, playas, coastal bluff scrub, coastal dunes, and chenopod scrub below 600 ft in elevation.	March–October	A	Not expected to occur; prior extensive impacts to project area, and species occurrences within vicinity of BSA are associated with bluffs on immediate coast.
Atriplex parishii	Parish's brittlescale	US: – CA: 1B	Annual herb. Alkali soils in meadows, vernal pools, chenopod scrub, and playas. Usually on drying alkali flats with fine soils.	June–October	A	Not expected to occur; prior extensive impacts to project area and no known occurrences within vicinity of BSA.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	US: – CA: 1B	Annual herb. Alkaline soils in scrub and herbaceous communities from 30 to 1,500 ft in elevation.	April–October	HP	Not expected to occur. Previous records in area are historic (1906). Not observed during survey.

Table 2.17.1: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur Within and in the Vicinity of the Biological Study Area

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Centromadia parryi ssp. *australis*	southern tarplant	US: – CA: 1B	Annual herb. In vernally wet areas, such as at the edges of marshes and vernal pools, at the edges of roads and trails, and in other areas of compacted, poorly drained, or alkaline soils where competition from other plants is limited, often due to disturbance, below 1,400 ft in elevation.	May–November	HP	Low potential to occur; prior impacts to project area and species is found in disturbed areas. Known populations in vicinity. Not observed during survey.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	US: FE CA: SE/1B	Annual herb. Coastal dunes and salt marshes.	May–October	A	Not expected to occur. Suitable habitat is absent.
Crossosoma californicum	Catalina crossosoma	US: – CA: 1B	On rocky sea bluffs, in wooded canyons, and dry, open sunny spots on rocky clay, below 1,600 ft in elevation. Known only from the Channel Islands and mainland Los Angeles County.	Blooms February–May (perennial deciduous shrub)	A	Not expected to occur; prior extensive impacts to project area and suitable habitat is absent.
Dithyrea maritima	beach spectaclepod	US: – CA: ST	Coastal dunes	Blooms March–May (perennial herb	A	Not expected to occur; prior extensive impacts to project area, suitable habitat is absent, and no known occurrences within vicinity of BSA.
Dudleya virens ssp. *insularis*	island green dudleya	US: – CA: 1B	Rocky areas in coastal scrub and coastal bluff scrub below 1,000 ft in elevation. Known only from the Channel Islands and mainland Los Angeles and Ventura counties.	Blooms April–June (perennial herb)	A	Not expected to occur; prior extensive impacts to project area and suitable habitat is absent.
Horkelia cuneata var. *puberula*	mesa horkelia	US: – CA: 1B	Perennial herb. Sandy or gravelly soils in chaparral, or rarely in cismontane woodland or coastal scrub at 200 to 2,700 ft in elevation.	February–July (sometimes to September)	A	Not expected to occur. Suitable habitat is absent and BSA is outside elevation range for species.

Table 2.17.1: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur Within and in the Vicinity of the Biological Study Area

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Isocoma menziesii var. *decumbens*	decumbent goldenbush	US: – CA: 1B	Sandy soils, often in disturbed areas, in coastal scrub and chaparral from 30 to 440 ft in elevation.	April–November	HP	Not expected to occur. Perennial shrub not observed during survey.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	US: – CA: 1B	Annual herb. Vernal pools and alkaline soils in marshes, playas, and similar habitats below 4,000 ft in elevation.	February–June	A	Not expected to occur. Suitable habitat is absent.
Leptosyne maritima	Sea dahlia	US: – CA: 2B	Perennial herb. Coastal bluff scrub and coastal scrub.	March–May	A	Not expected to occur. Suitable habitat is absent.
Lycium brevipes var. *hassei*	Santa Catalina Island desert-thorn	US: – CA: 1B	Deciduous shrub of coastal bluffs and slopes in coastal bluff scrub and coastal scrub at 30 to 1,000 ft in elevation. Known only from the Channel Islands (extirpated), one location on the Palos Verdes Peninsula in Los Angeles County, and one location in Orange County.	Blooms in June (deciduous shrub)	A	Absent. Perennial shrub not observed.
Nama stenocarpa	mud nama	US: – CA: 2B	Annual to perennial herb. Occurs in marshes and swamps and along lake margins and riverbanks. From 15 to 1,640 ft in elevation.	January–July	A	Not expected to occur; prior extensive impacts to project area and suitable habitat is absent.
Navarretia prostrata	prostrate vernal pool navarretia	US: – CA: 1B	Annual herb. Vernal pools, usually alkaline, from 50 to 4,000 ft in elevation.	April–July	A	Not expected to occur; prior extensive impacts to project area, suitable habitat is absent, and no known occurrences within vicinity of BSA.
Nemacaulis denudata var. *denudata*	coast woolly-heads	US: – CA: 1B	Annual herb. Sandy places such as coastal dunes below 300 ft in elevation.	April–September	A	Not expected to occur; prior extensive impacts to project area and suitable habitat is absent.

Table 2.17.1: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur Within and in the Vicinity of the Biological Study Area

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Orcuttia californica	California orcutt grass	US: FE CA: SE/1B	Vernal pools from 50 to 2,200 ft in elevation. In California, known from Los Angeles, Ventura, Riverside, and San Diego counties. Also occurs in Mexico.	April–August	A	Not expected to occur; prior extensive impacts to project area, suitable habitat is absent, and no known occurrences within vicinity of BSA.
Pentachaeta lyonii	Lyon's pentachaeta	US: FE CA: SE/1B	Clay soils at edges of openings in fire-adapted coastal sage scrub and chaparral on saddles between hills, on the tops of small knolls, or in flat areas at the bases of slopes, particularly where soil crust results in less competition from annual grasses, from 100 to 2,100 ft in elevation. Occurs only in the Santa Monica Mountains in eastern Ventura and western Los Angeles counties and in the western Simi Hills in Ventura County. Based on historical records, it once occurred on the Palos Verdes Peninsula and on Santa Catalina Island, but it has not been seen at these locations since 1910 and 1855, respectively, and is assumed to be extirpated from those areas.	Blooms March–August (annual herb)	A	Not expected to occur; prior extensive impacts to project area and suitable habitat is absent.
Phacelia stellaris	Brand's star phacelia	US: – CA: 1B	Dunes and sandy openings in coastal scrub communities at 20 to 1,300 ft in elevation. In western Riverside County, this species appears to be restricted to sandy washes and benches in alluvial floodplains. Known only from Los Angeles (believed extirpated), Riverside and San Diego counties. The most recent record of this species from Los Angeles County was in 1943.	Blooms March–June (annual herb)	A	Not expected to occur. Suitable habitat is absent.

Table 2.17.1: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur Within and in the Vicinity of the Biological Study Area

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Suaeda esteroa	estuary seablite	US: – CA: 1B	Perennial herb. Coastal salt marshes below 15 ft in elevation. Occurs along the immediate coast from Santa Barbara County to Baja California.	May–October (January)	A	Not expected to occur. Suitable habitat is absent.
Symphyotrichum defoliatum	San Bernardino aster	US: – CA: 1B	Perennial herb. Vernally wet sites (e.g., ditches, streams, and springs) in many plant communities below 6,700 ft in elevation.	July–November	A	Not expected to occur. Suitable habitat is absent.

1B = Rare, threatened or endangered in California and elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere

A = Absent; no habitat present and no further work needed.
BSA = Biological Study Area
FE = Federal Endangered
ft = foot/feet
HP = Habitat Present
SE = State Endangered
ST = State Threatened

2.18 Animal Species

2.18.1 Regulatory Setting

Many State and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or State Endangered Species Acts. The proposed project is not expected to impact any animal species listed or proposed for listing as threatened or endangered as discussed earlier in the introduction to Chapter 2. All other special-status animal species are discussed here, including CDFW fully protected species and Species of Special Concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.18.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (March 2018) prepared for the proposed project.

2.18.2.1 Literature Review, Records Search, and Field Visits

A literature review and records search were conducted to identify the presence or potential occurrence of sensitive or special-status animal species within or in the vicinity of the Biological Study Area (BSA). A species list was obtained from the USFWS Information Planning and Conservation System in October 2017 and is provided in Appendix A of the *Natural Environment Study (Minimal Impacts)* (March 2018). No federally or State-listed as threatened or endangered species have the potential to occur in the BSA due to the lack of suitable habitat. As a result,

threatened and endangered species are not discussed further in this document. The following 29 special-status animal species that are not federally and/or State-listed as endangered or threatened were identified in the literature and records searches as potentially occurring in or near the BSA:

- Crotch's bumble bee (*Bombus crotchii*)
- Senile tiger beetle (*Cicindela senilis frosti*)
- Globose dune beetle (*Coelus globosus*)
- Monarch butterfly (California overwintering population) (*Danaus plexippus*)
- El Segundo flower-loving fly (*Rhaphiomida terminates terminatus*)
- Wandering skipper (*Panoquina errans*)
- Southern California legless lizard (*Anniella stebbinsi*)
- San Bernardino ring-necked snake (*Diadophis punctatus modestus*)
- Coast horned lizard (*Phrynosoma blainvillii* (*coronatum*)
- Cooper's hawk (*Accipiter cooperii*)
- Tricolored blackbird (*Agelaius tricolor*)
- Great blue heron (*Ardea herodias*)
- Great egret (*Ardea alba*)
- Burrowing owl (*Athene cunicularia*)
- Snowy egret (*Egretta thula*)
- Merlin (*Falco columbarius*)
- American peregrine falcon (*Falco peregrinus anatum*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Black-crowned night-heron (*Nycticorax nycticorax*)
- Osprey (*Pandion haliaetus*)
- Western mastiff bat (*Eumops perotis californicus*)
- Silver-haired bat (*Lasionycteris noctivagans*)
- Western red bat (*Lasiurus blossevillii*)
- Hoary bat (*Lasiurus cinereus*)
- Western yellow bat (*Lasiurus xanthinus*)
- Yuma myotis (*Myotis yumanensis*)
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- Big free-tailed bat (*Nyctinomops macrotis*)

A field survey was conducted on December 21, 2017, to characterize the general biological resources and to ascertain the presence or absence of special-status animal species and the likelihood of their occurrence in and near the BSA.

A habitat suitability assessment for bats was conducted on December 21, 2017, to ascertain the potential for bat roosting activity within the BSA. Potential roosting sites were identified through the examination of bridges and culvert structures for suitable crevices and roosting habitat. Large trees suitable for foliage-roosting species were noted, but roosting activity at these locations could not be confirmed due to the nature of this roosting behavior.

No special-status animal species were observed or otherwise detected in the BSA during the field surveys. A total of 18 special-status animal species have the potential to occur in the BSA and are discussed below.

2.18.2.2 Nesting Migratory Birds

Based on the literature review, records search, and field surveys conducted for the project, suitable habitat is present within the BSA for the following eight special-status avian species. These species are also protected under the Migratory Bird Treaty Act (MBTA; 16 United States Code [USC] Sections 703–711) and under Sections 3503 and 3800 of the California Fish and Game Code.

- Cooper's hawk (*Accipiter cooperii*)
- Great blue heron (*Ardea herodias*)
- Great egret *(Ardea alba*)
- Snowy egret (*Egretta thula*)
- American peregrine falcon (*Falco peregrinus anatum*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Black-crowned night heron (*Nycticorax nycticorax*)
- Osprey (*Pandion haliaetus*)

The BSA provides nesting habitat, consisting primarily of ornamental vegetation, for migratory birds. Migratory birds are protected under the MBTA. In addition, Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of migratory birds, their nests, or their eggs.

2.18.2.3 Special-Status Grassland and Open Habitat Animal Species

Based on the literature review, records search, and field surveys conducted for the project, marginally suitable habitat is present within the BSA for the following special-status grassland and open habitat species:

- Burrowing owl (*Athene cunicularioa*)
- Merlin (*Falco columbarius*)

2.18.2.4 Special-Status Bridge/Culvert and Crevice-Dwelling Animal Species

Based on the literature review, records search, and field surveys conducted for the project, suitable roosting habitat is present within the BSA for the following eight special-status bridge/culvert and crevice-dwelling animal species:

- Western mastiff bat (*Eumops perotis californicus*)
- Silver-haired bat (*Lasionycteris noctivagans*)
- Western red bat (*Lasiurus blossevillii*)
- Hoary bat (*Lasiurus cinereus*)
- Western yellow bat (*Lasiurus xanthinus*)
- Yuma myotis (*Myotis yumanensis*)
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- Big free-tailed bat (*Nyctinomops macrotis*)

However, of these eight species, one species (i.e., pocketed free-tailed bat) does not have potential to roost within the BSA due to the lack of suitable habitat. No roosting bats or their sign were observed at any of the potential roosting structures.

2.18.2.5 Monarch Butterflies

When overwintering in large concentrations, the monarch butterfly is considered a Special Animal by the CDFW (2017a); therefore, its wintering sites are protected. The winter roosts are typically located in wind-protected tree groves (i.e., eucalyptus, Monterey pine, or cypress) with nectar and water sources nearby. No monarch butterflies were observed within the BSA, and no known roosting sites are located within the BSA. However, suitable wintering habitats for monarch butterflies do exist within the BSA. In the literature search, the California Natural Diversity Database (CNDDB) reported known occurrences (circa 1985) at Point Fermin Park, which is approximately 3 miles southwest of the BSA.

Table 2.18.1 provides a summary of the identified special-status animal species and their habitat requirements, as well as their probability of occurrence in the BSA.

2.18.3 Environmental Consequences

2.18.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Construction of the Build Alternative could temporarily impact nesting birds protected under the MBTA and the California Fish and Game Code, as well as special-status grassland and open habitat species, during the bird breeding season as a result of the removal of potential nesting habitat. The typical breeding season is February 15 through August 31. The Build Alternative's effects can be avoided by conducting a focused survey for nesting birds prior to disturbance of structures, construction, or removal of vegetation. Conducting disturbances or removal of vegetation outside of the bird breeding season would reduce the chances of having active bird nests within the project area, and using exclusionary buffers if nests are found can avoid impacts to any active bird nests found within the project area. With implementation of Project Feature PF-BIO-1, potential temporary impacts to nesting birds during project construction would not be adverse.

PF-BIO-1 **Avoidance of Breeding Season.** In order to avoid impacts to nesting birds, any native or exotic vegetation removal or tree-trimming activities will occur outside the nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season, a preconstruction survey will be conducted by a qualified biologist within three days of commencement of vegetation removal or the beginning of construction activities to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

No roosting bats or their sign were observed at any of the potential roosting structures, and no potential roosting structures within the BSA would be impacted. The proposed project is not expected to impact special-status or other bat species. No avoidance and minimization measures or compensatory mitigation are warranted because the proposed project is not expected to impact any potential roosting habitat.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Invertebrates						
Bombus crotchii	Crotch's bumble bee	US: – CA: SA	Inhabits open grassland and scrub habitats primarily in California.	N/A	A	Not expected to occur within the BSA. Suitable habitat is absent.
Cicindela senilis frosti	senile tiger beetle	US: – CA: SA	Inhabits marine shoreline, from the central California coast south to the salt marshes of San Diego. Also found at Lake Elsinore. Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	Presumed spring–fall	A	Not expected to occur. Suitable habitat is absent.
Coelus globosus	globose dune beetle	US: – CA: SA	Inhabitant of coastal sand dune habitat, from Bodega Head in Sonoma County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; burrows beneath the sand surface and is most common beneath dune vegetation.	Year-round; adults often nocturnal	A	Not expected to occur within the BSA. Suitable habitat is absent.
Danaus plexippus (wintering sites)	Monarch butterfly (California overwintering population)	US: – CA: SA	Winter roosts are located in wind-protected tree groves (i.e., eucalyptus, Monterey pine, and cypress) with nectar and water sources nearby.	September–March	HP	Moderate potential to occur. Potentially suitable overwintering habitat for species is present in eucalyptus trees in BSA. Species not observed during survey.
Panoquina errans	wandering skipper	US: – CA: SA	Southern California coastal salt marshes. Requires moist salt grass for larval development.	Primarily June–September	A	Not expected to occur within BSA. Suitable habitat is absent.
Rhaphiomida terminates terminatus	El Segundo flower-loving fly	US: – CA: SA	Restricted to remnant dunes on the shores of Santa Monica Bay.	August–September	A	Not expected to occur within BSA. Suitable habitat is absent.
Reptiles						
Anniella stebbinsi	Southern California legless lizard	US: – CA: SSC	Inhabits coastal dunes, sandy washes, and alluvial fans where there is moist loose soil with sufficient plant cover and/or leaf litter.	Breeds early spring–July; diurnal	A	Not expected to occur within BSA. Suitable habitat is absent.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Diadophis punctatus modestus	San Bernardino ring-necked snake	US: – CA: SA	Along drainage courses, in mesic chaparral and oak and walnut woodland communities. Moist habitats of southwestern California from about Ventura County to Orange County.	Variable year-round	A	Not expected to occur within BSA. Suitable habitat is absent.
Phrynosoma blainvillii	coast horned lizard	US: – CA: SSC	Primarily in sandy soil in open areas, especially washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs west of the deserts from northern Baja California north to Shasta County below 8,000 ft in elevation.	April–July, with reduced activity August–October	A	Not expected to occur within BSA. Suitable habitat is absent.
Birds						
Accipiter cooperii (nesting)	Cooper's hawk	US: – CA: SA	Primarily forests and woodlands throughout North America. Nests in trees.	Year-round; nesting March–June	HP	Moderate possibility of nesting in large trees. Species not observed during survey.
Agelaius tricolor (nesting colony)	tricolored blackbird	US: – CA: State candidate for listing as endangered	Open country. Forages in grassland and cropland habitats. Nests in large groups near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, or tall herbs. Seeks cover for roosting in emergent wetland vegetation, especially cattails and tules, and also in trees and shrubs.	Year-round; nesting April–June	A	Not expected to occur. Suitable habitat is absent.
Ardea herodias (nesting colony)	great blue heron	US: – CA: SA	Usually nests in trees, but also on large bushes, poles, reed beds, and even on the ground. Frequents a wide range of wetland habitats at other times of year.	Year-round; nesting primarily January–July	HP	Low probability of nesting in large trees. Species not observed during survey.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Ardea alba (nesting colony)	great egret	US: – CA: SA	Occurs in a wide range of wetland habitats in much of the temperate and tropical zones worldwide. Nests primarily in trees.	Year-round; nesting primarily March–July	HP	Low probability of nesting in large trees. Species not observed during survey.
Athene cunicularia	burrowing owl	US: – CA: SSC	Open country in much of North and South America.	September–April	HP	Low probability of occurrence in open areas. Species not observed during survey.
Egretta thula (nesting colony)	snowy egret	US: – CA: SA	Occurs in a wide range of wetland habitats throughout much of the Americas. Nests primarily in trees.	Year-round; nesting primarily February–July	HP	Low probability of nesting in large trees. Species not observed during survey.
Falco columbarius	merlin	US: – CA: SA	Open country; breeds in the Holarctic Region and winters south to the tropics. Uncommon fall migrant and winter visitor to southwestern California.	October–April	HP	Moderate probability of foraging occasionally on site. Species not observed during survey.
Falco peregrinus anatum (nesting)	American peregrine falcon	US: FD CA: CFP	Widespread but scarce and local throughout North America. Nests on buildings and bridges in the Los Angeles Basin.	Year-round; nesting February–May	HP	High probability that individuals nesting on Vincent Thomas Bridge occasionally forage on site. Species not observed during survey.
Lanius ludovicianus (nesting)	loggerhead shrike	US: – CA: SSC	Open country in much of North America but declining in many areas, including southwestern California.	Year-round; nesting March–July	HP	Low probability of nesting on site. Species not observed during survey.
Nycticorax nycticorax (nesting colony)	black-crowned night-heron	US: – CA: SA	Occurs in a wide range of wetland habitats in much of the temperate and tropical zones worldwide. Nests primarily in trees, sometimes in urban habitats.	Year-round; nesting primarily February–July	HP	Low probability of nesting in large trees. Species not observed during survey.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Pandion haliaetus (nesting)	osprey	US: – CA: SA	Estuaries, rivers, lakes, and marshes. Nests primarily on trees and other structures.	Year-round; nesting March–June	HP	Low probability of nesting in large trees or other structures. Species not observed during survey.
Mammals						
Eumops perotis californicus	western mastiff bat	US: – CA: SSC	Ranged historically throughout much of the southwestern United States and northwestern Mexico. In California, most records are from rocky areas at low elevations. Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, trees, and tunnels throughout southwestern California. May roost in tall bridges.	Year-round; nocturnal	HP	Species travels widely when foraging and suitable foraging habitat is present; however, species is not expected to roost within BSA.
Lasionycteris noctivagans	silver-haired bat	US: – CA: SA	Inhabits forested areas, where it forages in small clearings, along roadways and water-courses, and among trees. Generally roosts in trees, but occasionally enters buildings or caves. Prefers old-growth areas with snag densities of at least 21 per hectare. Range extends from extreme northeastern Mexico north to Alaska and east to the Atlantic Coast.	Year-round; nocturnal	HP	Marginally suitable roosting and foraging habitat present in BSA.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Lasiurus blossevillii	western red bat	US: – CA: SSC	Ranges from southwestern Canada through the western United States and Central America to South America. Forages over a wide range of habitats but is often associated with intact riparian habitat, particularly willows, cottonwoods, and sycamores. Typically solitary, roosting in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	Year-round; nocturnal	HP	Low probability of species potentially roosting within BSA.
Lasiurus cinereus	hoary bat	US: – CA: SA	Widespread in North America (and Hawaii). Forages over a wide range of habitats, but prefers open habitats with access to water and trees for roosting. Typically solitary, roosting in the foliage of shrubs or coniferous and deciduous trees. Roosts are usually near the edge of a clearing.	September–May; nocturnal	HP	Low probability of species potentially roosting within BSA.
Lasiurus xanthinus	western yellow bat	US: – CA: SSC	Varied habitats from the southwestern United States to southern Mexico; often associated with palms and desert riparian habitats. In southern California, it occurs in palm oases and in residential areas with untrimmed palm trees. Roosts primarily in trees, especially the dead fronds of palm trees, although it has also been documented roosting under the leaves of deciduous trees such as cottonwoods.	Year-round; nocturnal	HP	Low probability of species potentially roosting within BSA.

Table 2.18.1: Special-Status Animal Species Potentially Occurring or Known to Occur Within and in the Vicinity of the BSA

Scientific Name	Common Name	Status	General Habitat Description	Activity Period	Habitat Present/ Absent	Rationale
Myotis yumanensis	Yuma myotis	US: – CA: SA	Occurs in a variety of habitats in western North America, including riparian, arid scrublands and deserts, and forests. Optimal habitats are open forests and woodlands with sources of water over which to feed. Roosts in buildings, mines, caves or crevices; and under bridges. May occasionally roost in swallow nests.	Year-round; nocturnal	HP	Moderate probability that the species at least occasionally forages within BSA.
Neotoma lepida intermedia	San Diego desert woodrat	US: – CA: SSC	Frequents poorly vegetated arid lands and is especially associated with cactus patches. Occurs along the Pacific slope from about San Luis Obispo County to northwest Baja California.	Year-round; nocturnal	A	Not expected to occur. Suitable habitat is absent.
Nyctinomops femorosaccus	pocketed free-tailed bat	US: – CA: SSC	Usually associated with cliffs, rock outcrops, or slopes. May roost in buildings (including roof tiles) or caves. Rare in California, where it is found in Riverside, San Diego, Imperial, and possibly Los Angeles counties. More common in Mexico.	Year-round; nocturnal	A	May forage over BSA; however, no suitable roosting habitat is present within BSA.
Nyctinomops macrotis	big free-tailed bat	US: – CA: SCC	Occurs in a variety of habitats, including herbaceous and desert scrub areas, early stages of open forest, and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino, and Santa Rosa mountain ranges.	Year-round; nocturnal	HP	Travels widely when foraging and suitable foraging habitat is present; however, species is not expected to roost within BSA.

A = Absent; no habitat present and no further work needed.
BSA = Biological Study Area
FE = Federal Endangered
ft = foot/feet
FD = Federally Delisted
HP = Habitat Present
CFP = State Fully Protected
SA = State Special Animal
SSC = State Species of Special Concern

Overwintering population(s) of monarch butterflies that may be present within the BSA typically would remove themselves from the BSA during construction. However, with implementation of Measure BIO-2, the proposed project is not expected to directly or indirectly impact overwintering monarch butterflies.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements and thus would not result in the removal of any vegetation. Therefore, the No Build Alternative would not result in temporary impacts to special-status animal species in the BSA, including nesting birds, bats, and overwintering monarch butterflies.

2.18.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

The Build Alternative would not result in any permanent direct impacts on nesting birds, grassland and open habitat animal species, or overwintering monarch butterflies because either none of these species were observed or otherwise detected during surveys of the BSA or there is a lack of suitable habitat present within the BSA. Additionally, no roosting bats or their sign were observed at any of the potential roosting structures, and no potential roosting structures within the BSA would be impacted by the proposed project. Indirect noise impacts on nesting birds and bat species from traffic on State Route (SR) 47 and area streets would be expected to be the same as under existing conditions.

No Build Alternative

The No Build Alternative would not include operation of any of the proposed project improvements. Therefore, the No Build Alternative would not result in permanent impacts to special-status animal species in the BSA, including nesting birds, bats, or overwintering monarch butterflies.

2.18.4 Avoidance and Minimization Measures

Along with the project feature identified above in Section 2.18.3, Measure BIO-2 would avoid and/or minimize potential project effects to special-status animal species.

BIO-2 **Avoidance of Overwintering Monarch Butterflies.** If an overwintering population is observed (November 1 through May 1), an Environmentally Sensitive Area (ESA) buffer will be delineated around the roost by a qualified biologist. If monarch butterflies are

found at a roost site, construction shall not occur within the ESA buffer until the biologist has determined that the butterflies have left the area.

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2.19 Invasive Species

2.19.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.19.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (March 2018) prepared for the proposed project.

The California Invasive Plant Council (Cal-IPC) 2006 Invasive Plant Inventory highlights nonnative plants that are serious problems in wildlands (i.e., natural areas that support native ecosystems, including national, State, and local parks; ecological reserves; wildlife areas; national forests; and Bureau of Land Management lands). The inventory categorizes plants as High, Moderate, or Limited based on each species' negative ecological impact in California. Plants categorized as High have severe ecological impacts. Plants categorized as Moderate have substantial and apparent, but not severe, ecological impacts. Plants categorized as Limited are invasive, but their ecological impacts are minor on a statewide level. Another category is the "watch" list, which include species that have been assessed as posing a high risk of becoming invasive in the future in California.

As shown in Table 2.19.1, 28 nonnative plant species on the Cal-IPC Invasive Plant Inventory (High, Moderate, Limited, and Watch) were identified in the Biological Study Area (BSA). Three nonnative animal species—rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*sturnus vulgaris*)—were observed in the BSA.

Table 2.19.1: Invasive Plant Species in the Biological Study Area

Scientific Name	Common Name	Rating
EUDICOTS		
Aizoaceae	**Iceplant Family**	
Carpobrotus edulis	Hottentot-fig	High
Anacardiaceae	**Sumac Family**	
Schinus molle	Peruvian pepper tree	Limited
Schinus terebinthifolius	Brazilian pepper tree	Moderate
Asteraceae	**Sunflower Family**	
Carduus pycnocephalus	Italian thistle	Moderate
Helminthotheca echiodes	Bristly ox-tongue	Limited
Brassicaceae	**Mustard Family**	
Brassica nigra	Black mustard	Moderate
Hirschfeldia incana	Shortpod mustard	Moderate
Raphanus sativus	Wild radish	Limited
Chenopodiaceae	**Goosefoot Family**	
Salsola tragus	Russian-thistle	Limited
Atriplex semibaccata	Australian saltbush	Moderate
Euphorbiaceae	**Spurge Family**	
Ricinus communis	Castor bean	Limited
Fabaceae	**Legume Family**	
Acacia sp.	Acacia	Watch
Robinia pseudoacacia	Black locust	Limited
Geraniaceae	**Geranium Family**	
Erodium cicutarium	Redstem filaree	Limited
Moraceae	**Mulberry Family**	
Ficus sp.	Fig	Limited
Myrtaceae	**Myrtle Family**	
Eucalyptus sp.	Eucalyptus	Limited
Scrophulariaceae	**Figwort Family**	
Myoporum laetum	Myoporum	Moderate
Solanaceae	**Nightshade Family**	
Nicotiana glauca	Tree tobacco	Moderate
Verbenaceae	**Vervain Family**	
Lantana camara	Lantana	Watch
MONOCOTS		
Arecaceae	**Palm family**	
Phoenix canariensis	Canary Island palm	Moderate
Washingtonia robusta	Mexican fan palm	Moderate
Poaceae	**Grass family**	
Avena sp.	Wild oat	Moderate
Bromus diandrus	Ripgut grass	Moderate
Cynodon dactylon	Bermuda grass	Moderate
Leptochloa fusca ssp. *uninervia*	Mexican sprangletop	Watch
Pennisetum setaceum	Crimson fountaingrass	Moderate
Polypogon monspeliensis	Rabbitfoot grass	Limited
Stipa miliacea var. *miliacea*	Smilo grass	Limited

Source: *Natural Environment Study (Minimal Impacts)* (March 2018).

2.19.3 Environmental Consequences

2.19.3.1 Temporary Impacts

Build Alternative (Preferred Alternative)

Potential impacts from invasive species associated with construction and operation of transportation projects are considered permanent. Refer to Section 2.19.3.2, Permanent Impacts, for discussion regarding invasive species.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in impacts related to invasive species.

2.19.3.2 Permanent Impacts

Build Alternative (Preferred Alternative)

As noted earlier, potential impacts from invasive species associated with construction and operation of transportation projects are considered permanent because the introduction of invasive species into previously undisturbed areas would result in permanent impacts to any affected native habitats. Implementation of the Build Alternative has the potential to spread invasive species in the BSA through the entering and exiting of contaminated construction equipment, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species causing seed to be spread. With implementation of Project Feature PF-BIO-3, potential project-related permanent impacts related to invasive species would not be adverse.

PF-BIO-3 **Prevention of the Spread of Invasive Species.** During construction, the construction contractor will inspect and clean construction equipment at the beginning of each day and prior to transporting equipment from one project location to another. Any plants removed or soil disturbed during the course of construction will be contained and properly disposed of off site. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and implementation of Erosion-Control Best Management Practices (BMPs) will be free of invasive plant species seeds or propagules. No vegetation listed on the California Invasive Plant Council (Cal-IPC) inventory will be installed on the proposed project, and all plant palettes proposed for the project will be reviewed by a Qualified Biologist during the plans,

specifications, and estimates (PS&E) phase. City tree planting and removal requirements will also be adhered to.

No Build Alternative

The No Build Alternative would not include operation of any of the proposed project improvements. Therefore, the No Build Alternative would not result in impacts related to invasive species.

2.19.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would incorporate the project feature outlined above in Section 2.19.3.2, no adverse impacts related to invasive species would occur. Therefore, no avoidance, minimization, and/or mitigation measures are required.

2.20 Cumulative Impacts

2.20.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations Section 1508.7.

2.20.2 Methodology

The cumulative impact analysis methodology used was based on the eight-step process set forth in the California Department of Transportation (Caltrans) *Standard Environmental Reference (SER) Guidance for Preparers of Cumulative Impact Analysis* (2005). The eight-step process is as follows:

- Identify resources to be analyzed
- Define the Study Area for each resource (i.e., Resource Study Area [RSA])
- Describe the current health and historical context for each resource
- Identify direct and indirect impacts of the proposed project
- Identify other reasonably foreseeable actions that affect each resource
- Assess potential cumulative impacts

- Report results
- Assess the need for mitigation

2.20.2.1 Resources Excluded from Cumulative Impacts Analysis

As specified in the Caltrans guidance, if the proposed project would not result in a direct or indirect impact to a resource, it would not contribute to a cumulative impact on that resource and need not be evaluated with respect to potential cumulative impacts.

Those resources for which cumulative effects are not anticipated or for which the impacts were already analyzed in a cumulative context (e.g., traffic, air quality, and noise) are briefly discussed below.

- **Coastal Zones:** The improvements associated with the Build Alternative are consistent with the applicable policies and objectives contained in the San Pedro Local Coastal Program Specific Plan. Specifically, the project is consistent with the policies and objectives to maintain visual resources, preserve access to coastal views, sand protect public views from scenic highways. Additionally, the proposed project would require a consolidated coastal development permit from the California Coastal Commission. Coastal development permits ensure compliance with the policies of Chapter 3 of the California Coastal Act, which protect Coastal Zone resources. Therefore, the proposed project would not contribute to cumulative adverse impacts to coastal zones.
- **Wild and Scenic Rivers:** There are no wild and scenic rivers in the Study Area. Therefore, the proposed project would not contribute to cumulative adverse impacts to wild and scenic rivers.
- **Land Use:** The improvements associated with the Build Alternative are consistent with local and regional goals to improve traffic operations and to reduce congestion in the area. The Build Alternative would improve areas that are currently designated or used for transportation. Land use compatibility conflicts would not occur where existing land uses would be converted for transportation use. Therefore, adverse cumulative impacts related to land use would not occur.
- **Displacements:** The Build Alternative would not result in any residential displacements, but implementation of would result in the acquisition of an existing dog park and relocation of a police dog training facility, both on POLA property, because portions of this land are within the proposed on- and off-ramp facilities. Although the dog park would be permanently closed, it is on POLA

property and is not considered a permanent resource. The police dog training facility would be relocated outside the project area within POLA property. Therefore, the proposed project would not result in substantial cumulative impacts with respect to displacements in the community, and mitigation would not be required.

- **Parks and Recreation:** The Build Alternative would result in the acquisition of Knoll Hill Dog Park; however, since the dog park is on POLA property, it is not considered a permanent recreational resource and therefore construction of the Build Alternative would not permanently affect any permanent recreational resources. The Build Alternative would not result in temporary or permanent effects to park resources protected under Section 4(f); therefore, the proposed project would not contribute to cumulative adverse impacts related to parks and recreation.
- **Growth:** The Build Alternative would improve existing and future traffic operations, reduce congestion, and accommodate existing and future planned growth that would occur with or without the project. The Build Alternative does not induce growth or remove obstacles to growth in the area; therefore, it would not contribute to cumulative adverse impacts related to growth.
- **Utilities and Emergency Services:** Although it is anticipated that multiple projects may be constructed during the same timeframe as the proposed project, implementation of project feature PF-UES-2 would require the Contractor coordinate all temporary ramp and arterial roadway closures and detour plans with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times. Therefore, it is not anticipated that temporary impacts to emergency services associated with the proposed project would contribute to a cumulative effect within the Study Area. Additionally, the proposed project would not permanently adversely affect utilities or emergency services; therefore, it would not contribute to cumulative adverse effects to utility facilities and emergency service providers.
- **Traffic/Transportation:** The analysis of future traffic conditions in Section 2.5, Traffic/Transportation, for 2023 (Opening Year) and 2045 (Design Year) is a cumulative analysis in that it considers traffic generated by existing and future planned land uses and the effect of future planned transportation improvements. As a result of the cumulative analysis presented in Section 2.5, the Build Alternative would improve traffic operations and reduce congestion. Therefore, the Build Alternative would not contribute to cumulative adverse impacts to traffic/transportation.

- **Visual/Aesthetics:** The Build Alternative would not substantially change the existing views of and from State Route (SR) 47. Overall, the project does not propose any grade separations; therefore, the heights and locations of the proposed ramp realignments and other modifications would remain generally consistent with the existing condition and the project's existing urbanized setting would remain relatively unchanged. Therefore, the Build Alternative would not contribute to cumulative adverse effects to visual resources.
- **Cultural Resources:** Construction of the Build Alternatives would not directly or indirectly impact known cultural resources or cultural resources on or eligible for listing on the National Register of Historic Places and therefore would not contribute to cumulative adverse impacts related to cultural resources.
- **Hydrology and Floodplains:** The proposed project does not encroach on a 100-year floodplain; therefore, the Build Alternative would not contribute to adverse cumulative impacts related to hydrology or floodplains.
- **Water Quality:** As described in Section 2.9, Water Quality, there is potential for construction-related pollutants to spill or to leak, or to be transported via storm runoff into drainages adjacent to the study area and into downstream receiving waters during construction. However, implementation of project features PF-WQ-1 and PF-WQ-2 would reduce temporary construction-related impacts. The Build Alternative would comply with the requirements of the Construction General Permit, the Caltrans Storm Water Management Plan, and the Caltrans and City National Pollutant Discharge Elimination System permit, and would include best management practices to target pollutants of concern in storm water runoff during construction and operations. Considering the RSA for the project is urbanized, the application of regulatory requirements to the Build Alternative and resultant limited impacts would not contribute to cumulative adverse impacts to surface water quality.
- **Geology/Soils/Seismic/Topography:** The potential impacts of the Build Alternative related to geologic conditions and soils as discussed in Section 2.10, Geology/Soils/Seismic/Topography, would be avoided or minimized based on site-specific geotechnical design features, as described in Measure GEO-1. As a result, the Build Alternative would not contribute to cumulative adverse impacts related to geology, soils, seismic, and topography.
- **Air Quality:** With implementation of project features PF-AQ-1 through PF-AQ-5 and Measure AQ-6 identified in Section 2.13, construction-related emissions would not be substantial and are unlikely to contribute to cumulative air quality impacts. Construction activities related to the proposed project would last for less

than five years at one general location; therefore, construction-related emissions do not need to be included in regional and project-level conformity analysis. During operation, the Build Alternatives would result in very small increases or decreases in the regional emissions and would not contribute substantially to regional vehicle emissions. As described in Section 2.13, the proposed project was determined not to be a Project of Air Quality Concern by the Transportation Conformity Working Group.

- **Noise:** Although it is anticipated that multiple projects may be constructed during the same timeframe as the proposed project, it is not anticipated that temporary noise impacts would not contribute to a cumulative effect within the Study Area. Through public input regarding construction of noise barriers, it has been determined that implementation of noise abatement is not reasonable. Therefore, although noise impacts related to the proposed project would contribute to permanent cumulative effects related to noise, these effects would are not considered adverse.
- **Natural Communities:** The highly developed nature of the biological study area (BSA) presents various impediments to wildlife movement, including roads, walls, fences, buildings, and lack of vegetative cover. Mammals such as coyote, raccoon, opossum, and skunk have adapted to densely developed urban environments and may use urban streets as a movement corridor; however, there are no known wildlife movement corridors within the BSA or immediate vicinity. The proposed project is within an already urbanized area and, therefore, impacts to natural communities would not occur. As a result, the Build Alternative would not contribute to cumulative adverse effects related to natural communities.
- **Wetlands and Other Waters:** No wetlands, river, streams, or lakes are present within the BSA. Additionally, with implementation of the Statewide Construction General Permit described in project feature PF-WQ-1 in Section 2.9.3.1, the proposed project would have no impacts on jurisdictional and non-jurisdictional waters. Therefore, the proposed project would not contribute to cumulative adverse effects related to wetlands and other waters.
- **Plant Species:** Although literature review identified special-status plant species potentially occurring in or near the vicinity of the BSA, no special-status plant species were observed or otherwise detected during field surveys conducted for the proposed project. As a result, the Build Alternative would not impact special-status plant species and, therefore, would not contribute to cumulative adverse effects related to special-status plant species.

- **Invasive Species:** The Build Alternatives would not substantially increase the potential for the spread of invasive species. Compliance with standard invasive species control procedures (refer to project feature PF-IS-1 in Section 2.19, Invasive Species) would address this impact. Therefore, the proposed project would not contribute to cumulative adverse effects related to invasive species.

2.20.3 Resources Evaluated for Cumulative Impacts

The following discussion of potential cumulative impacts is presented by environmental resource area. The reasonably foreseeable projects considered in this analysis are listed in Table 2.20.1 and are shown on Figure 2.20-1.

In general, most of the development projects listed are infill projects, and the majority of the listed transportation and LAHD projects would improve or modify existing facilities.

The following resources are evaluated in this section for cumulative impacts: community impacts, hazardous waste, paleontology and animal species.

2.20.3.1 Community Impacts

Community Character and Cohesion

The RSA for cumulative community impacts consists of Census Tracts 2965, 2962.10, and 2962.20 in the City of Los Angeles, previously shown on Figure 2.3-1. Census tracts provide established boundaries for community demographics. Each of the census tracts within the RSA exhibit one or more community cohesion indicators in comparison to the overall County of Los Angeles (County) population. The City of Los Angeles and all of the census tracts have a higher percentage of transit-dependent population than the County overall, and they each have at least one ethnically homogeneous community. Census Tract 2965 also has a higher percentage of long-term residents compared to the County. Based on these data, the City of Los Angeles and study area census tracts with two community cohesion indicators appear to exhibit a moderate degree of community cohesion. Census Tract 2965, which has one additional community cohesion indicator, appears to exhibit a high degree of community cohesion.

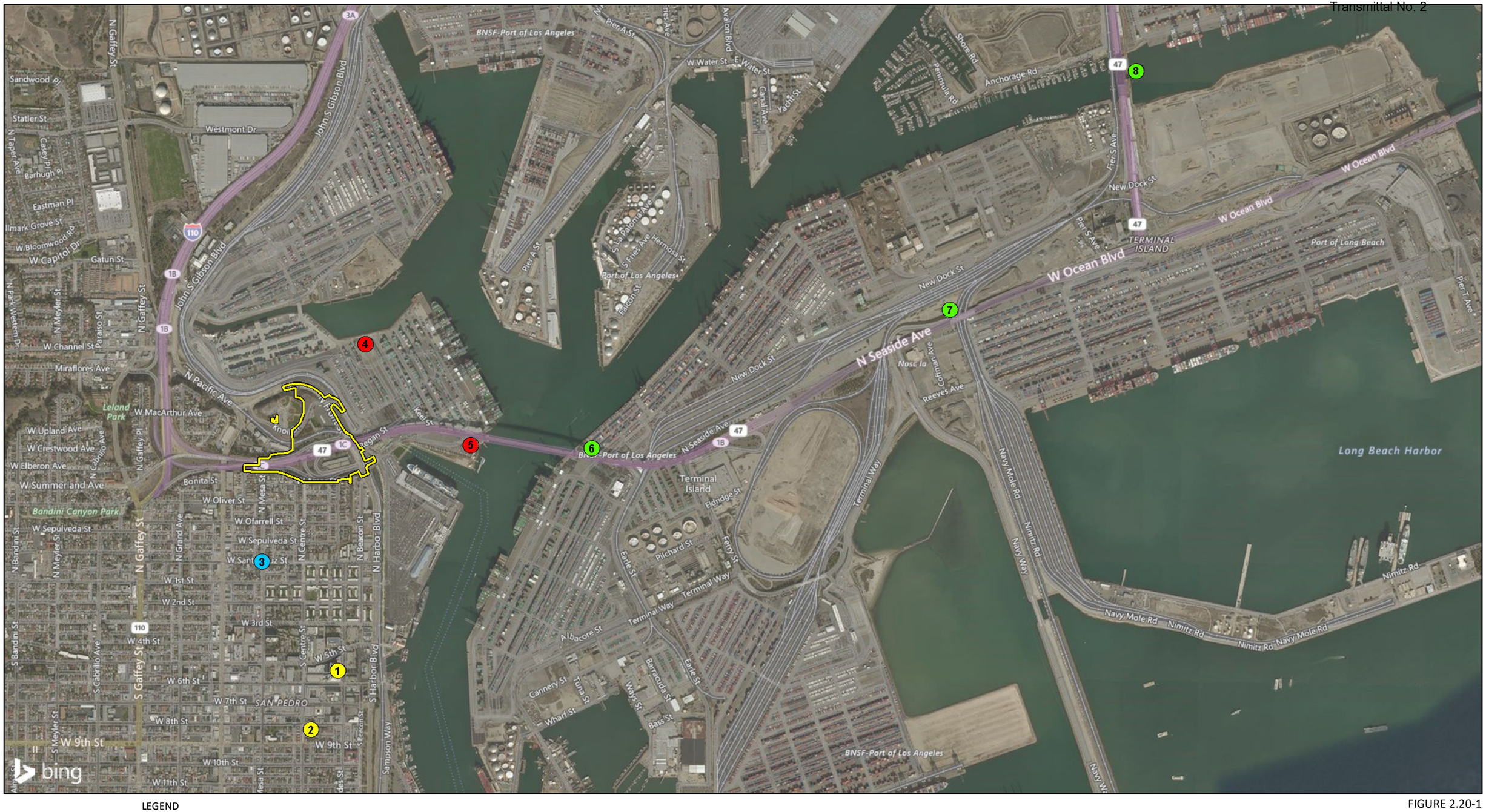
Table 2.20.1: Planned Projects List

ID Number	Name	Jurisdiction	Planned Uses	Status	Potential Environmental Impacts
1	550 S Palos Verdes Street Project	City of Los Angeles/ San Pedro	New seven-story mixed use building with 404 residential dwelling units with 5,200 sq ft of ground floor commercial space (core and shell) over a subterranean garage.	Under construction.	Aesthetics Biology Geology and Soils Greenhouse Gas Emissions Noise Public Services Transportation Utilities
2	255–295 W Eighth St	City of Los Angeles/ San Pedro	24 small single-family dwellings. The proposed dwellings would be four stories, range in height between 33 feet to 49.5 feet, and would have an attached two-car garage, for a total of 48 parking spaces.	Mitigated Negative Declaration No. ENV-2014-1880-MND certified. Under construction.	Aesthetics Air Quality Geology Greenhouse Gas Emissions Hazards Hydrology and Water Quality Noise Public Services Recreation Transportation Utilities
3	San Pedro Community Plan	City of Los Angeles/ San Pedro	The proposed project is an update of the San Pedro Community Plan, which is intended to promote an arrangement of land uses, streets, and services that would encourage and contribute to economic, social, and physical health, safety, welfare, and convenience for the people who live and work in the community.	FEIR/FEIS certified SCH#2008021004	Aesthetics Air Quality Greenhouse Gas Emissions Noise Utilities/Services Systems
4	Berths 97-109 China Shipping Container Terminal Project	City of Los Angeles Harbor Department	Continued operation of the terminal under new and/or modified mitigation measures, along with an incrementally higher cargo throughput level compared to that assumed in the 2008 EIR/EIS.	Draft SEIR is available for public review. SCH #2003061153	Air Quality Greenhouse Gases Traffic
5	Avalon Freight Service Relocation Project	City of Los Angeles Harbor Department	Shifting existing Catalina Island freight operations from Berth 184 in Wilmington to Berth 95 in San Pedro.	Initial Study/Negative Declaration (adopted January 2018) SCH# 2014101049	

Table 2.20.1: Planned Projects List

ID Number	Name	Jurisdiction	Planned Uses	Status	Potential Environmental Impacts
6	Vincent Thomas Bridge Seismic Restoration	City of Los Angeles Harbor Department	Construction includes replacing bridge dampers and installing buckling restrained braces.	Construction is ongoing and is anticipated to be completed in 2019.	
7	SR 47/Navy Way Interchange (RTP: 1M0430)	City of Los Angeles Harbor Department and Port of Long Beach	Construction of interchange at the intersection of SR-47/Navy Way to eliminate the existing traffic signal and movement conflicts. This project removes the last signal on SR 47 between Interstate 710 and Interstate 110. SR 47 is an NHS Intermodal Connector Route.	Conceptual planning stage.	
8	SR-47 Expressway	City of Los Angeles, City of Carson, City of Long Beach	Construction of a 4-lane expressway and 2-lane flyover to Schuyler Heim Bridge. LA0D45 is split into two projects; LA0G45 (Express way & flyover) and LA0D45A (Bridge Replacement).	EIR/EIS (adopted August 2009) SCH# 20021009 FTIP funds for 2021/2022 (FTIP ID: LA0D45).	Community Impacts Utilities and Public Services Traffic and Transportation Visual Resources Cultural Resources Hydrology, Floodplains, and Oceanography Water Quality and Stormwater Runoff Geology/Soils/Seismicity/Paleontology/Topography/Mineral Resources Hazardous Waste/Hazardous Materials Air Quality Noise Biological Resources

Sources: LSA (2017), City of Los Angeles (2018), City of Los Angeles Harbor Department (2018).
Southern California Association of Governments (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Project List
SCAG 2017 Federal Transportation Improvement Program (FTIP) Completed Projects List
FEIR/FEIS = Final Environmental Impact Report/Final Environmental Impact Statement
LAHD = City of Los Angeles Harbor Department
MND – Mitigated Negative Declaration
NHS = National Highway System
SEIR = Supplemental Environmental Impact Report
sq ft = square feet
SR = State Route



LEGEND

Project Location

Cumulative Projects

- Community Plan
- Port of Los Angeles
- Residential
- Transportation

0 750 1500
FEET

SOURCE: Bing Maps (2015)

I:\AEM1602\GIS\MXD\CumulativeProjects.mxd (5/21/2018)

FIGURE 2.20-1

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Cumulative Projects
07-LA-47 PM 0.3/0.8
EA No. 07-31850

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The City of Los Angeles had a higher unemployment rate (4.4 percent) than the County in November 2017; however, Los Angeles County had a slightly higher unemployment rate (4.1 percent) than California overall (4.0 percent). The City of Los Angeles accounts for almost 40 percent of the County's primary jobs, while the County accounts for greater than 25 percent of the total number of primary jobs in California. Therefore, the City of Los Angeles effectively functions as a regional employment center, and the County effectively serves as a statewide employment center.

The percentage of persons living below the poverty level is substantially higher in the City of Los Angeles (21.5 percent) than in the County (17.8 percent). All of the census tracts within the RSA also exhibit a substantially higher percentage of persons living below the poverty level than the County, ranging from 27.4 percent to 41.7 percent.

During construction, community members would still be able to access community services and facilities; however, there would be some degree of inconvenience due to construction-related delays, temporary closures, and construction equipment operation. Additionally, construction jobs would generate temporary employment and revenues for both local and regional economies.

Once operational, the Build Alternative would result in beneficial effects related to community character and cohesion in terms of improved access and connectivity, and decreased travel times. It is unlikely that community character and cohesion would be permanently impacted by the proposed project in the City of Los Angeles and any of the census tracts within the RSA. It is also important to note that SR 47 has been a prominent transportation corridor in the area since the 1960s, and most of the communities in the RSA have been established adjacent to the existing SR 47 right-of-way. Changes associated with the proposed project would result in minimal alterations to community character and cohesion, and no substantial adverse effects to communities would occur.

As previously noted in Table 2.20.1, several planned transportation and development projects occur in the general vicinity of the proposed project with the potential to cumulatively affect communities in the area. Projects related to SR 47 (refer to Project IDs 7 and 8), could compound effects to communities within the RSA for the proposed project. However, the Vincent Thomas Bridge Seismic Restoration project would be completed prior to construction of the proposed project and the SR 47/Navy

Way Interchange is still in the conceptual planning stage. Additionally, these projects occur near communities that are already freeway-adjacent geographically, so impacts to community cohesion are unlikely. Further, the RSA for the proposed project is largely developed, and communities in the vicinity are also already freeway-adjacent. Therefore, the proposed project would not change the fundamental nature of adjacent communities and the project contribution to cumulative impacts to community character and cohesion is minimal; mitigation would not be required.

2.20.3.2 Hazardous Waste/Materials Impacts

The RSA for hazardous waste/materials extends approximately 1 mile from the limits of the proposed project, consistent with the National Priority List records search area for the Initial Site Assessment.

During construction of the Build Alternative, there is the potential to encounter hazardous materials in soils and existing road and structure materials. Construction of the Build Alternative would disturb soils, demolish existing structures, and remove pavement markings. As a result, contaminants such as aerially deposited lead and structural materials (polychlorinated biphenyls, lead chromate, lead-based paint, and asbestos-containing material) may be encountered during construction.

The LAHD has conducted the top-soil testing for the "medium risk" railroad property. Results of this investigation recommend further testing of soil to the top of groundwater, and testing of the groundwater itself. Project Feature PF-HAZ-3 allows for supplemental site investigations, including soil and groundwater investigations, to be performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment. If contamination is identified, a remediation plan will be prepared, implemented, and completed prior to right-of-way certification. In addition, the Build Alternative would be required to adhere to State and federal regulations with respect to the use, generation, and disposal of hazardous waste/materials during construction and operation of the project. Based on the urbanized RSA and adherence to regulatory requirements, the Build Alternative's contribution to cumulative hazardous waste/materials impacts would not be considerable.

The planned projects in Table 2.20.1 consist primarily of residential and transportation uses, which are low-risk uses with respect to hazardous waste/material impacts. However, there are also port projects that may present a higher risk with respect to hazardous waste/material impacts depending on the type of operations and the degree to which these materials are used. Regardless, there is an existing regulatory framework in place for use, generation, and disposal of hazardous waste/ materials and penalties for noncompliance.

Like the Build Alternative, some of the planned projects have the potential to be exposed to hazardous waste/materials through releases at adjacent or nearby properties or through renovation or demolition of buildings or other structures. This could occur with transportation projects such as the SR 47 Schuyler Heim Bridge Replacement and SR 47 Expressway Project (Project ID 8), which would require the demolition of structures such as bridges, which may cause the unintentional release of hazardous materials. Likewise, these planned projects would be required to comply with State and federal regulations with respect to the use, generation, and disposal of hazardous materials/waste during construction and operation. Therefore, the proposed project, in combination with other planned projects, would not result in substantial cumulative hazardous waste/materials impacts, and mitigation would not be required.

2.20.3.3 Paleontology Impacts

The RSA for paleontological resources includes areas where excavation would take place for the proposed project. The RSA is made up of artificial fill, Old Shallow Marine Deposits on Wave-Cut Surface (deposited 11,700–781,000 years ago), and the San Pedro Formation, Undivided (deposited 781,000–2.588 million years ago). Geologic mapping and the results of the locality search through the Natural History Museum of Los Angeles County (LACM) indicates that the RSA contains older Quaternary Alluvium, also known as the Palos Verdes Sand (i.e., Old Shallow Marine Deposits). According to the fossil locality search conducted through the LACM, there are no known fossil localities within the boundaries of the project area. However, the museum has records of several fossil localities near the project area from the same or similar deposits as those mapped within the RSA. These include terrestrial and marine fossils in generalized "older Quaternary Deposits," which include both of the deposits noted above. The closest locality, LACM 187, located east of Harbor Boulevard and south of the Vincent Thomas Bridge is a locality that produced specimens of rattlesnake (Crotalus) and ground sloth (Megalonyx). Nearby LACM 1026 produced a specimen of duck (Chendytes lawi). Farther to the south, on the east

side of Harbor Boulevard and south of O'Farrell Street, LACM 1057 yielded mixed marine and terrestrial fauna. To the southwest of the project area, the closest fossil locality in the San Pedro Formation, Undivided, is LACM 3658, which is located just outside the western end of the project area. This locality was discovered during construction of the Vincent Thomas Bridge, and it yielded a substantial quantity of marine vertebrates, including several types of shark (e.g., Carcharhinus, Galeorhinus zyopterus, *Triakis semifasciata*), stingray (*Dasyatis dipterurus*), skate (Raja), and other vertebrates. Other nearby localities are discussed in Section 2.11, Paleontology.

At some locations, excavation during the construction of the Build Alternative is expected to extend deeper than ten feet (ft) below the original ground surface and, as a result, it is likely that sensitive sediments that might contain paleontological resources would be encountered. Current project plans indicate that the main area of excavation for the proposed project would be on the hill at the northern end of the project area for the realignment of Knoll Drive. This hill is 50 ft in height and would be cut back by approximately 50 ft. In addition, cuts would be made to the existing 30 ft. tall slope on the eastbound SR 47 off-ramp. Excavation to depths of approximately four to eight ft. would be required along the new ramps for surface drainage. Some utility relocation, primarily along Front Street, would be required and would involve excavation to depths of approximately three to ten ft, depending on the specific area and utility concerned. Cleaning up aerially deposited lead adjacent to roadways throughout the project area is expected to entail excavation to depths of one to three ft. Excavation depths for retaining walls and noise barriers would depend on the location and final design. As such, excavation for some of the retaining walls and sound walls may extend below a depth of 10ft and have the potential to impact paleontological resources.

The proposed project and other projects in the vicinity of the RSA could disturb sensitive sediments that may contain paleontological resources, thus contributing to cumulative impacts to paleontological resources. Projects such as the 550 South Palos Verdes Street Project and 255–295 W Eighth Street project (Project Nos. 1 and 2 respectively), which would subdivide parcels and/or potentially excavate in previously undisturbed areas, could in conjunction with nearby construction requiring ground disturbance, contribute cumulatively to impacts on paleontological resources. However, impacts to paleontological resources as a result of other projects would depend on the depth of excavation, if excavation is required, and the presence of sensitive sediments. Additionally, the RSA and the surrounding environment are

urbanized and partially underlain by disturbed sediments (artificial fill). Finally, with implementation of Measure PAL-1 (provided in Section 2.11.4), a Paleontological Mitigation Plan would be prepared with guidelines for the protection of paleontological resources and actions for inadvertent discoveries during construction activities. Therefore, the proposed project, in combination with other planned projects, would not result in substantial cumulative impacts to paleontological resources, and mitigation would not be required.

2.20.3.4 Animal Species Impacts

The RSA for animal species is the BSA for the proposed project.

No roosting bats or their signs were observed at any of the potential roosting structures, and no potential roosting structures within the BSA would be impacted. The proposed project is not expected to impact special-status or other bat species. Therefore, no substantial cumulative effects are anticipated to occur to roosting bats.

Overwintering population(s) of monarch butterflies that may be present within the BSA typically would remove themselves from the BSA during construction. However, implementation of Measure BIO-2 (provided in Section 2.18.4) would provide for an Environmentally Sensitive Area buffer to be delineated should an overwintering population of monarch butterflies be observed in the construction area, and therefore the proposed project is not expected to directly or indirectly impact overwintering monarch butterflies. Therefore, there would be no substantial cumulative effect to this species related to the proposed project.

Construction of the Build Alternative could temporarily impact nesting birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, as well as special-status grassland and open habitat species during the bird breeding season as a result of the removal of vegetation. With implementation of project feature PF-BIO-1, provided in Section 2.18.3.1, vegetation removal or tree-trimming activities would take place outside the nesting season. Should vegetation removal or tree-trimming activities be necessary during the nesting season, preconstruction surveys would be performed within three days of vegetation removal/construction activities to identify the locations of any nests and to set up exclusionary buffer areas if nests are present. No construction or clearing would take place within these buffer areas until the biologist determines that the young have fledged the nest or the nest is no longer active. Therefore, potential temporary impacts during project construction to nesting birds would not be adverse, and there

would be no substantial cumulative effect to bird species related to the proposed project.

Like the Build Alternative, each of the other planned projects has the potential to directly or indirectly impact animal species during construction or and/or operation. Similar to the proposed project, other planned projects would avoid, minimize, or mitigate any direct or indirect impacts as a result of construction activities or operation of the project. The proposed project is located in an urbanized area (i.e., consisting of developed and ornamental habitats). The primary biological effects in the region occurred with the original construction of the roadways, and cumulative effects to individual species would be minimal. Therefore, the proposed project would not result in cumulative impacts to animal species in combination with other planned projects.

2.20.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

Chapter 3 California Environmental Quality Act (CEQA) Evaluation

The State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project (proposed project) is a joint project by the California Department of Transportation (Caltrans), the City of Los Angeles Harbor Department (LAHD), and the City of Los Angeles (City), and is subject to State and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Federal Highway Administration's (FHWA) responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans. Caltrans is the Lead Agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a *whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the *State CEQA Guidelines* list a number of "mandatory findings

of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.1 CEQA Environmental Checklist

This CEQA Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This CEQA Checklist incorporates by reference the information contained in Chapters 1 and 2.

3.1.1 Aesthetics

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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 day or nighttime views in the area?	☐	☐	☒	☐

CEQA Significance Determinations for Aesthetics

a), b) No Impact. The proposed project is located within the City of Los Angeles in a mostly urban setting consisting of residential, recreation, transportation, commercial, and undeveloped land uses. The project area is highly urbanized, with some ornamental and weedy vegetation, and has low biological value to native plant and wildlife species. Therefore, there are no distinct natural open spaces or natural features in the project area. While there is no Caltrans officially designated or eligible scenic highway, the City's Mobility and Conservation Elements designate Front Street/Harbor Boulevard as a scenic highway within the project area. This designation seeks to preserve the views of the Vincent Thomas Bridge, historic San Pedro, and POLA. The proposed project does not include any grade separations; therefore, the heights and locations of the proposed ramp realignments, and other modifications would remain generally consistent with the existing condition and the project site's existing urbanized setting would remain relatively unchanged. As a result, the proposed project would not affect scenic views or result in the loss of any scenic resources in the area. Therefore, the proposed project would result in no impacts related to scenic vistas or scenic resources. No mitigation is required.

c) Less Than Significant Impact. Construction of the proposed project would result in temporary visual changes as a result of construction activities, including: removal of vegetation; grading; and use of night lighting, temporary structures, hauling equipment, construction staging or laydown yards, and signs indicating traffic detours. After construction is completed, these temporary impacts would no longer

occur. Project Features PF-VIS-1 and PF-VIS-2 would ensure that landscaping is preserved to the extent possible and that all areas disturbed by construction would receive replacement planting, using native and/or drought-tolerant plants where feasible. However, implementation of the proposed project would introduce additional man-made components to the existing built environment, with key design changes consisting of new traveled ways, additional ramp lanes, new ramps, and retaining walls. Where feasible, the proposed project may consider implementing nautical-themed aesthetic treatments for proposed new structures to match the existing aesthetic treatment theme of similar existing structures in the project area (Measure VIS-3). The proposed project does not include any grade separations; therefore, the heights and locations of the proposed realignments and other modifications would remain generally consistent with the existing condition and the project site's existing urbanized setting would remain relatively unchanged. Existing trees and other vegetation would be replaced by concrete and new landscaping would be planted where possible. However, the proposed project changes would be perceived as extensions of the existing highway features rather than new, contrasting features. Adherence to Project Features PF-VIS-1 through PF-VIS-2 and Measure VIS-3 would ensure impacts associated with this issue are less than significant. No mitigation is required.

d) Less Than Significant Impact. Existing light sources surrounding the project site include traffic, street lighting, and lighted parking lots; signalization at intersections and freeway on- and off-ramps; industrial areas (port activities); and limited light sources from residential areas. Existing light fixtures within the freeway right-of-way (ROW) along with westbound (WB) on-and-off ramps and the eastbound (EB) on-ramp would be relocated as part of the proposed project. The relocated light fixtures would be designed and installed consistent with existing Caltrans standards. The relocated light fixtures would be similar in function and light intensity to the existing lighting. The proposed project would also result in the construction of an additional signalized intersection and the addition of a new EB off-ramp lane. The site is located within an area that already experiences some levels of light and/or glare from the existing vehicles, streetlights, and port activities. Light and glare from lighting fixtures and vehicles entering/exiting the project site after project implementation would generally be similar to the existing condition in the project area. As a result, the proposed project would result in less than significant impacts related to lighting and glare. No mitigation is required.

3.1.2 Agriculture and Forest Resources

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 Dept. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact. According to the Farmland Mapping Monitoring Program of the California Resources Agency, there is no designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project area. The Build Alternative would have no impact on designated farmland. No mitigation is required.

b) No Impact. As shown on Figures 2.1-1 and 2.1-2, there is no land designated for agricultural purposes and no agricultural uses within the study area. A few parcels within the study area are zoned A1-1, which allows for agricultural uses; however,

those are not within the project footprint and are not currently utilized for agricultural activities. As such, no farmland would be at risk for conversion and no conflicts would exist with any Williamson Act contracts due to implementation of the proposed project. No mitigation is required.

c), d) No Impact. There are no forest land, timberland, or timberland-zoned timberland production areas within the study area. The study area is within an urbanized area. No impact to or conversion of forest or timberlands would occur as a result of the proposed project. No mitigation is required.

e) No Impact. As described in Section 2.1, the proposed project involves ramp and other improvements to an existing freeway facility and would not have substantial permanent effects related to plan consistency and land use compatibility.
The majority of land use conversion from current and planned land uses to transportation use would occur on land that is either already within Caltrans ROW or land that is already designated for transportation, communications, and utilities uses. No changes in the existing environment would occur that could result in conversion of Farmland to non-agricultural use or forestland to nonforest use. No impact would occur, and no mitigation is required.

3.1.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

CEQA Significance Determinations for Air Quality

The potential for the Build Alternative to adversely impact air quality was assessed in the *SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project Air Quality Report* (May 2018) and Section 2.13, Air Quality, of this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. The proposed project is listed in the financially constrained list of projects in the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) under RTP ID 1120007 (see Appendix A of the *Air Quality Report*). The 2016 RTP was approved by the Regional Council of the Southern California Association of Governments (SCAG) on April 7, 2016, with ongoing amendments as needed with Amendment No. 2, adopted on July 6, 2017. Additionally, the proposed project is also in the 2017 FTIP through Amendment No. 17-02, which received its conformity determination from the FHWA/Federal Transit Administration (FTA) on February 21, 2017. The design concept and scope of the proposed project are consistent with the project description in the 2016 RTP and the "open to traffic" assumptions of the SCAG's regional emissions analysis. The 2016 Air Quality Management Plan (AQMP) and California State Implementation Plan (SIP) focus on attainment of the ozone and particulate matter NAAQS through the reduction of ozone and PM2.5 precursor nitrogen oxides (NO_X) as well as direct control of particulate matter. The AQMP proposes emission reduction measures to bring the Basin into attainment with respect to the NAAQS. AQMP attainment strategies include mobile-source control measures and clean fuel programs, which are enforced at the state and federal levels, for engine manufacturers and petroleum refiners and retailers. As a result, the proposed project would be required to comply with these regulations as they are developed. Compliance with AQMP requirements would further ensure that the proposed project's activities would not obstruct implementation of the AQMP. For these reasons and the information in Sections 2.13 and 3.1.3 b), the Build Alternative would not conflict with or obstruct the implementation of the applicable air quality management plans (AQMP and SIP). The impact is considered less than significant. No mitigation is required.

b) Less Than Significant Impact. Short-term impacts to air quality would occur during excavation, grading, hauling, and other activities related to construction, as described in more detail in Section 2.13.4.2. All construction vehicles and equipment would be required to be equipped with the State-mandated emission control devices pursuant to State emission regulations and standard construction practices. Short-term

construction particulate matter emissions would be further reduced with the implementation of required dust suppression measures outlined in South Coast Air Quality Management District (SCAQMD) Rules 402 and 403. The Caltrans Standard Specifications for Construction (Section 14-9.03 [Dust Control]) would also be adhered to. After construction of the proposed project is complete, all construction-related impacts would cease. Therefore, project construction would not violate State or federal air quality standards or contribute to the existing air quality violations in the South Coast Air basin (Basin).

As stated in Section 2.13.3.2 under the subheading *Particulate Matter (PM_{10} and $PM_{2.5}$)*, the proposed project is not considered a project of air quality concern (POAQC) under Code of Federal Regulations (CFR) Title 40, Part 93.123(b)(1). The proposed project was submitted to stakeholders at a Transportation Conformity Working Group (TCWG) meeting on February 6, 2018, pursuant to the interagency consultation requirement of 40 CFR 93.105 (c)(1)(i). The proposed project was approved and concurred upon by Interagency Consultation at the TCWG meeting as not a POAQC, and the proposed project meets the requirements of the Clean Air Act (CAA) and 40 CFR 93.116.

As shown in Table 2.13.2, the proposed project is within an attainment/maintenance area for carbon monoxide (CO). The proposed project is not expected to result in any concentrations exceeding the 1-hour or 8-hour CO standards. Therefore, a detailed CALINE4 CO hot-spot analysis was not required. The analysis also concluded that while vehicle miles traveled (VMT) would increase, implementation of the proposed project would reduce congestion. Additionally, the proposed project does not involve parking lots and therefore would not increase the number of vehicles operating in cold start mode. As a result, the proposed project is not likely to worsen air quality.

The proposed project is not expected to result in a substantial change to automobile or truck volumes on SR-47 or adjacent streets. Consequently, as shown in Table 2.13.4, the emission effects of the proposed project would be low, and it is expected that there would be no appreciable difference in overall mobile-source air toxics (MSAT) emissions between the No Build and Build Alternatives. Because the emission effects of the proposed project would be low, it is expected that there would be no appreciable difference in overall MSAT emissions between the No Build and Build Alternatives.

As shown in Table 2.13.2, the project limits are within an attainment/maintenance area for federal particulate matter less than 10 microns in size (PM_{10}) standards and a nonattainment area for federal particulate matter less than 2.5 microns in size ($PM_{2.5}$) standards. Therefore, per 40 CFR 93, hot-spot analyses are required for conformity purposes. The United States Environmental Protection Agency (USEPA) guidance for particulate matter hot-spot analysis and interagency consultation were used to determine whether the project is a POAQC. On February 6, 2018, the TCWG determined that the proposed project is not a POAQC. Per the transportation conformity rules and regulations, all nonexempt projects must go through review by the TCWG. The proposed project was approved and concurred upon by Interagency Consultation at the TCWG meeting as a project not having adverse impacts on air quality, and the proposed project meets the requirements of the CAA and 40 CFR 93.116.

Based on the information provided above, the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant, and no mitigation is required.

c) Less Than Significant Impact. As described in Section 2.13.3, the Build Alternative would not result in concentrations exceeding the 1-hour or 8-hour CO standards, would not delay the attainment of the $PM_{2.5}$ or PM_{10} ambient air quality standards (AAQS) in the Basin. Further, as described in Section 2.13.3, under the subheading *Long-Term Regional Vehicle Emissions Impacts*, since the proposed project is included in the 2016 RTP/SCS it would not result in a cumulatively considerable net increase of these pollutants. Therefore, impacts are considered less than significant and no mitigation is required.

d) Less Than Significant Impact. As discussed in Section 2.13.2.3 of this environmental document, the sensitive receptors in the vicinity of the project limits are single- and multifamily residences, schools, and a sports park. The proposed project may result in temporary, short-term construction-related increases in pollutant concentrations associated with construction equipment emissions and fugitive dust. However, implementation of Project Features PF-AQ-1 through PF-AQ-5 and Measure AQ-6, provided in Section 2.13, would avoid and minimize those potential short-term air quality impacts on sensitive receptors during construction.

The operation of the proposed project would result in a less than significant impact related to CO, $PM_{2.5}$, and PM_{10}, as outlined in Responses 3.1.3 b) and c) above. No mitigation is required.

e) Less Than Significant Impact. The proposed project may result in temporary, short-term construction-related objectionable odors from sources such as equipment emissions and asphalt paving. Project Features PF-AQ-1 through PF-AQ-5 and Measure AQ-6, provided in Section 2.13, would minimize any potential short-term odor impacts, and potential odor impacts are considered less than significant. No mitigation is required.

3.1.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐
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 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

CEQA Significance Determinations for Biological Resources

The potential for the proposed project to result in adverse impacts to biological resources was assessed in the *Natural Environment Study* (NES; March 2018), and Sections 2.15, Natural Communities; 2.16, Wetlands and Other Waters; 2.17, Plant Species; 2.18, Animal Species; and 2.19, Invasive Species, in this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. The Biological Study Area (BSA) is highly urbanized with some ornamental and weedy vegetation that has low biological value to native plant and wildlife species.

The BSA is highly disturbed and does not contain high-quality suitable habitat for special-status plant species. Additionally, no special-status plant species were observed or otherwise detected in the BSA during the field survey. Therefore, construction of proposed project would not result in temporary or permanent impacts on special-status plant species. No mitigation is required.

Construction of the proposed project could temporarily impact nesting birds protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code either directly or indirectly as a result of the removal of potential nesting habitat. With implementation of Project Feature PF-BIO-1, provided in Section 2.18.3, vegetation removal or tree-trimming activities would occur outside of the nesting season. Should vegetation removal or tree-trimming activities be necessary during the nesting season, a preconstruction survey would be conducted within three days of commencement of vegetation removal or construction activities to identify the locations of nests and establish exclusionary buffers if nests are present. No work activity would take place within the buffer zone until the biologist determines that the young have fledged or the nest is no longer active. Therefore, potential temporary

impacts to nesting birds during project construction would be less than significant. No mitigation is required.

No roosting bats or their signs were observed at any of the potential roosting structures, and no potential roosting structures within the BSA would be impacted. As a result, construction of the proposed project is not anticipated to result in temporary or permanent impacts on special-status or other bat species. No mitigation is required.

While overwintering population(s) of monarch butterflies may be present within the BSA, they typically would remove themselves from the BSA during construction. However, with implementation of Measure BIO-2, provided in Section 2.18.4, an Environmentally Sensitive Area (ESA) buffer would be delineated around the roost if an overwintering population of monarch butterflies is observed. If monarch butterflies are found at a roost site, construction shall not occur within the ESA buffer until the biologist has determined that the butterflies have left the area. Therefore, potential temporary impacts to overwintering monarch butterflies during project construction would be less than significant. No mitigation is required.

With the implementation of Project Feature PF-BIO-1 and Measure BIO-2, provided in Section 2.18, potential impacts to special-status species would be less than significant. No mitigation is required.

b) Less Than Significant Impact. As previously identified, the project site is within a disturbed urban area. Implementation of the proposed project would not have an adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans. However, implementation of the proposed project has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasive species, the inclusion of invasive species in seed mixtures and mulch, disturbances to soil surfaces, and improper removal and disposal of invasive species that results in the seed being spread along the highway. This may potentially affect existing habitat in the project vicinity. However, with implementation of Project Feature PF-IS-1, potential project-related permanent impacts related to invasive species would be less than significant and no mitigation is required.

c) No Impact. Based on information provided in the NES (February 2018), no wetlands, rivers, streams, or lakes are present within the BSA. A formal jurisdictional delineation survey was completed in 2017. It was determined that there were no drainage features potentially subject to the jurisdiction of the United States Army Corps of Engineers (USACE), the California Department of Fish and Wildlife

(CDFW), or the Regional Water Quality Control Board (RWQCB) within the BSA. Thus, the proposed project would not require authorizations from the USACE (pursuant to Section 404 of the Clean Water Act [CWA]), the RWQCB (pursuant to Section 401 of the CWA), or the CDFW (pursuant to Section 1602 of the California Fish and Game Code). Therefore, the proposed project would not result in impacts to federally protected wetlands. No mitigation is required.

d) Less Than Significant Impact. As discussed in the NES (February 2018), no wildlife was observed during the 2017 focused surveys. As is common with transportation corridors in general, existing SR-47 presents a barrier to wildlife movement and does not facilitate habitat connectivity. Additionally, there are no native habitats within or adjacent to the BSA. Therefore, the proposed project would not affect wildlife movement corridors or interfere with established native resident migratory wildlife corridors. Additionally, as discussed above, no wetlands, rivers, streams, or lakes are present within the BSA. Therefore, the proposed project would not interfere with the movement of any native resident or migratory fish or impede the use of native wildlife nursery sites. No mitigation is required.

e) Less Than Significant Impact. The City's Protected Tree Ordinance No. 177,404 (effective April 23, 2006) defines "'Protected Trees' as any of the following southern California native tree species, which measures 4 inches or more in cumulative diameter, 4.5 feet above the ground level at the base of the tree (i.e., diameter at breast height [DBH]): any native species of oak (*Quercus* sp., with the exception of scrub oak [*Q. berberidifolius*]), southern California black walnut (*Juglans californica* var. *californica*), California bay laurel (*Umbellularia californica*), and western sycamore (*Platanus racemosa*)." Any of these protected native tree species removed must be replaced at a minimum two-to-one (2:1) ratio with a minimum 48-inch box size (if available) tree and sufficient trees of that size to replace the crown of the removed tree. No protected trees, as defined in the City's Protected Tree Ordinance, were identified in Appendix A, Lists of Plant and Wildlife Species Observed, of the NES. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No mitigation is required.

f) No Impact. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans applicable to the proposed project. Therefore, there is no impact. No mitigation is required.

3.1.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

CEQA Significance Determinations for Cultural Resources

The potential for the proposed project to result in adverse impacts related to cultural and paleontological resources was assessed in the *Historic Property Survey Report* (HPSR; June 2018) and the attachments to the HPSR, the *Paleontological Resources Identification and Evaluation Report* (PIR/PER; February 2018), and Sections 2.7, Cultural Resources, and 2.11, Paleontology, of this environmental document. The following discussions are based on those analyses. In accordance with California Public Resources Code (PRC) Section 21080.3.1 and Assembly Bill (AB) 52, Caltrans initiated early consultation with California Native American Tribes in July 2015. Refer to Chapter 4 of this environmental document for detailed information pertaining to California Native American Tribe consultation.

a) Less Than Significant Impact. Table 3.1 provides the built-environment resources evaluated for the proposed project and their eligibility for listing in the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register). One historic property within the project APE is eligible for inclusion in the National Register and listed in the California Register: the Vincent Thomas Bridge. However, the Build Alternative would not result in an adverse change to the historic property, nor would it indirectly alter the setting of the bridge in a way that affects its ability to convey its historic significance. The Pacific Electric Railway's Harbor Belt Line is not eligible for listing in the National Register and was also determined ineligible as a historical resource under CEQA. The State Historic Preservation Officer (SHPO) concurred with these

Table 3.1: Built Resources Within the Project Area of Potential Effects

Name/Type	Address/Location	Year Built	National Register/California Register Eligibility[1]
Vincent Thomas Bridge	Generally between Ferry Street and Harbor Boulevard, City of Los Angeles	N/A	Determined eligible under National Register and listed in California Register
Pacific Electric Railway, Harbor Belt Line segment (19-188896)	Generally on the east side of Harbor Boulevard and the south side of Knoll Hill, City of Los Angeles	1963	Determined ineligible under National Register and California Register
Single-family residence	321 Viewland Place (7448-036-003)	1946	Determined exempt from evaluation as a historic property under Section 106 PA
Apartments	661 North Harbor Boulevard (7449-005-010)	1973	Determined exempt from evaluation as a historic property under Section 106 PA
Multifamily residence	572 Harker Street (7449-002-001)	1954	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	623 North Mesa Street (7449-002-022)	1963	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	616 North Mesa Street (7449-003-044)	1940	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	352 West Amar Street (7449-003-019)	1953	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	340 West Amar Street (7449-003-048)	1922	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	324 West Amar Street (7449-003-051)	1923	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	318 West Amar Street (7449-003-053)	2001	Determined exempt from evaluation as a historic property under Section 106 PA
Single-family residence	314 West Amar Street (7449-003-052)	2001	Determined exempt from evaluation as a historic property under Section 106 PA
Multifamily residence	600–604 North Palos Verdes Street (7449-007-023)	1944	Determined exempt from evaluation as a historic property under Section 106 PA

Source: *Historical Resources Evaluation Report* (June 2018); *Historic Property Survey Report* (June 2018)
[1] These determinations are a result of studies conducted for the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project.
APN= Assessor's Parcel Number
California Register = California Register of Historical Resources
N/A = not applicable
National Register = National Register of Historic Places
Section 106 = Section 106 of the National Historic Preservation Act of 1966
SR = State Route

eligibility determinations on September 20, 2018. All other built-environment properties within the project APE have been determined exempt from further evaluation, pursuant to Attachment 4 of the Caltrans Section 106 PA, as Property Types 2, 3, 4, or 6, which are properties that are modern or have lost integrity because of alterations.

It has been determined that a finding of No Historic Properties Affected is appropriate because the Build Alternative would not result in an adverse change to the Vincent Thomas Bridge, nor would it indirectly alter the setting of the bridge in a way that

affects its ability to convey its historic significance. Therefore, a less than significant impact would occur to historical resources pursuant to State CEQA Guidelines Section 15064.5. No mitigation is required.

b) Less Than Significant Impact. No prehistoric resources were identified in the APE through archival research or the field survey. Archival research regarding the location of tribal villages indicates that no village sites exist within the APE. The survey showed that all surveyable areas of the APE exhibited high levels of disturbance from the freeway and nearby construction. Therefore, the likelihood of encountering intact archaeological resources is very low. However, there is always the potential to encounter unknown buried cultural resources or archaeological materials within the project disturbance limits during construction. Project Feature PF-CR-1 would require that if buried cultural resources or archaeological materials are exposed during construction of the Build Alternative, work in the area be halted until a qualified archaeologist can evaluate the nature and significance of the find. Additionally, Measures CR-3 and CR-4 would be implemented to involve the Kizh Nation in cultural training and supervised field spot checks prior to and during construction. With compliance with Project Feature PF-CR-1 and Measures CR-3 and CR-4, provided in Section 2.7.3, potential impacts to previously unknown cultural resources would be less than significant. No mitigation is required.

c) Less Than Significant Impact. Geologic mapping indicates the project area contains artificial fill, Old Shallow Marine Deposits on Wave-Cut Surface, and the San Pedro Formation, Undivided. With its disturbed nature and uncertain context, artificial fill has no paleontological sensitivity. However, the results of the literature review and fossil locality search demonstrate that scientifically significant paleontological resources have been recovered near the project area and elsewhere in the region from the San Pedro Formation, Undivided, as well as from sediments under different names but equivalent in age and depositional environment to the Old Shallow Marine Deposits on Wave-Cut Surface. In addition, fragments of fossil shell were identified in the project area during the field survey in areas mapped with Old Shallow Marine Deposits on Wave-Cut Surface. Therefore, the Old Shallow Marine Deposits on Wave-Cut Surface and the San Pedro Formation, Undivided, are considered to have high paleontological sensitivity. Excavation activities for the Build Alternative are planned in areas with the paleontologically sensitive Old Shallow Marine Deposits on Wave-Cut Surface and the San Pedro Formation, Undivided. As such, construction of the Build Alternative has the potential to impact scientifically significant, nonrenewable paleontological resources. Measure PAL-1,

provided in Section 2.11.3, requires preparation and implementation of a Paleontological Mitigation Plan (PMP) in the event paleontological resources are encountered during project excavation. Adherence to the PMP during construction would reduce potential impacts to less than significant. No mitigation is required.

d) Less Than Significant Impact. No human remains are known to exist within the project APE. Therefore, construction of the Build Alternative would not impact known human remains. If human remains are exposed during construction, Project Feature PF-CR-2 (provided in Section 2.7.3) requires compliance with State Health and Safety Code Section 7050.5, which states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the Los Angeles County Coroner shall be contacted. Pursuant to California PRC Section 5097.98, if the remains are thought to be Native American, the Coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendant (MLD). At the same time, the Caltrans District 7 Environmental Branch Chief or the District 7 Native American Coordinator would be contacted so Caltrans may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. With compliance with Project Feature PF-CR-2, provided in Section 2.7.3, potential impacts to previously unknown human remains would be less than significant. No mitigation is required.

3.1.6 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the 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 issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) 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 waste water?	☐	☐	☐	☒

CEQA Significance Determinations for Geology and Soils

The potential for the proposed project to result in adverse impacts related to geology and soils was assessed in Section 2.10, Geology/Soils/Seismic/Topography, in this environmental document.

a) i) No Impact. The project limits are not in an Alquist-Priolo Earthquake Fault Zone, and there are no known active or potentially active faults mapped as crossing or in the immediate vicinity of the project site. Because the project limits are not crossed by a known fault and are not in an Alquist-Priolo Earthquake Fault Zone, the

improvements of the proposed project are not expected to be exposed to effects associated with fault displacement and ground rupture. No mitigation is required.

a) ii) and iii) Less Than Significant Impact. The principal seismic hazard in the project vicinity is ground shaking resulting from an earthquake along one of several major active or potentially active faults that could damage SR-47 facilities and structures. Those faults include the Palos Verdes fault (approximately 0.8 mile [mi] away), the Cabrillo onshore fault (approximately 2.5 mi away), the THUMS-Huntington Beach fault (approximately 3.2 mi away), the Cabrillo offshore fault (approximately 5 mi away), and the Compton fault (approximately 6.4 mi away). Moderate to intense seismic shaking is common and likely to occur in the study area during the life of the improvements provided by the proposed project. As a result, the proposed project would be subject to effects associated with seismic shaking that could damage bridges, ramps, other structures, or the road surfaces. With design and construction of the proposed project consistent with the Caltrans *Highway Design Manual* (2016), other required standards, and recommendations from the Final Geotechnical Design Report, as required in Measure GEO-1 (provided in Section 2.10.3), impacts associated with seismic hazards, including ground shaking, ground failure, and liquefaction, would be less than significant. No mitigation is required.

a) iv) Less Than Significant Impact. As described in Section 2.10.2, the project site is within an area containing a cluster of small, shallow, surficial landslides. Measure GEO-1 would require a slope stability analysis to be performed for the embankments in the final design Foundation Report. The geotechnical conditions in the project area would be assessed in detail, and project-specific findings and recommendations would be incorporated into the final design of the proposed project. With design and construction of the proposed project consistent with the Caltrans *Highway Design Manual* (2016), other required standards, and the aforementioned recommendations from the Final Foundation Report and Geotechnical Design Report, as required in Measure GEO-1, impacts associated with landslides would be less than significant. No mitigation is required.

b) Less Than Significant Impact. Construction of the proposed project could temporarily disturb soils in the project area. Excavated soil in construction areas would be exposed, resulting in increased potential for soil erosion during construction compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. During all project construction activities, the construction contractor would be required to adhere to the requirements of the General Construction Permit

and to implement erosion and sediment control BMPs specifically identified in the project Storm Water Pollution Prevention Plan to keep sediment from moving off site into receiving waters and impacting water quality in those waters. Erosion impacts related to water quality are specifically evaluated in Section 2.9, Water Quality, in this environmental document. With implementation of Project Features PF-WQ-1 and PF-WQ-5 (described in Section 2.9.3) during construction and operation of the proposed project and Project Feature PF-GEO-2, (described in Section 2.10.3), which provides for revegetation of graded slopes and direct runoff, potential soil erosion impacts would be less than significant. No mitigation is required.

c) Less Than Significant Impact. As described in Section 2.10.2, there is a potential for landslides, liquefaction, and subsidence within the project area. However, design and construction of the proposed project would be consistent with the Caltrans *Highway Design Manual* (2016), other required standards, and recommendations from the Foundation Report and Geotechnical Investigation Report discussed in Measure GEO-1. In addition, the proposed project would modify an existing facility. The likelihood of the geologic unit or soil becoming unstable as a result of the proposed project is low. Therefore, impacts associated with landslides, lateral spreading, subsidence, liquefaction, or collapse would be less than significant. No mitigation is required.

d) Less Than Significant Impact. According to the *San Pedro Waterfront Project EIR/EIS* (adopted on September 29, 2009), expansive soil may be present in the project area. The San Pedro Waterfront project area is located within and adjacent to the southern portion of the proposed project. As discussed in Measure GEO-1 (described in Section 2.10.4), soil expansion potential would be further evaluated and recommendations for design identified as part of the geotechnical investigation. With compliance with the project-specific findings and recommendations summarized in the Foundation Report and Geotechnical Investigation Report, potential impacts related to expansive soil would be less than significant. No mitigation is required.

e) No Impact. The proposed project would not use septic tanks or alternative methods for disposal of wastewater into subsurface soils, and would not connect to existing public wastewater infrastructure. Therefore, the proposed project would not result in impacts related to septic tanks or alternative wastewater disposal methods. No mitigation is required.

3.1.7 Greenhouse Gas Emissions

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

Please refer to Section 3.2, Climate Change, below, for a discussion of greenhouse gas (GHG) emissions.

3.1.8 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) 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?	☐	☐	☐	☒

CEQA Significance Determinations for Hazards and Hazardous Materials

The potential for the proposed project to result in significant impacts related to hazards and hazardous materials was assessed in the *Initial Site Assessment* (ISA;

February 2017), *Addendum to the Initial Site Assessment* (December 2018), and in Section 2.12, Hazardous Waste/Materials, of this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. During construction, there is a potential to encounter hazardous materials in soils and existing road and structures materials. Construction of the proposed project would disturb soils, demolish existing structures, and remove pavement markings. As a result, contaminants such as aerially deposited lead (ADL) and structural materials (polychlorinated biphenyls, lead chromate, lead-based paint [LBP], and asbestos-containing materials [ACM]) may be encountered during construction.

Additionally, three parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines or past railroad activities. Construction activities may come in contact with groundwater and as a result, soil and groundwater investigations will be conducted to assess the potential presence of hazardous contaminants and to determine disposal options if necessary for any contaminated groundwater.

Typical hazardous materials anticipated to be used during construction of the proposed project (e.g., solvents, paints, fuels) and hazardous wastes generated during construction would be handled in accordance with applicable federal and State regulations and Caltrans policies regarding the use, storage, handling, disposal, and transport of these materials.

Project Features PF-HAZ-1 through PF-HAZ-4 in Section 2.12.3 describe required further testing and proper handling of hazardous waste and materials and would be adhered to during construction. With implementation of these measures, potential impacts related to hazardous materials would be less than significant.

Routine maintenance activities during operation of the proposed project would comply with applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Operation of the proposed project would not result in a significant permanent impact related to the transport or emissions of hazardous waste or materials. No mitigation is required.

b) Less Than Significant Impact. The proposed project would not create a substantial hazard to the public or the environment through any reasonably foreseeable upset or accident conditions involving the release of hazardous materials.

As discussed in Response 3.1.8 a) above, routine hazardous materials such as paint, solvents, and fuel would be used, handled, stored, disposed of, and transported during construction of the proposed project in accordance with applicable local, State, and federal regulations. During operation of the proposed project, transport of hazardous materials is subject to strict regulation. Caltrans, the California Highway Patrol, and local police and fire departments are trained in emergency response procedures for safely responding to accidental spills of hazardous substances on public roads, which further reduces impacts. Hence, operation of the proposed project would not result in a significant permanent impact related to the transport or upset of hazardous waste and materials. No mitigation is required.

c) Less Than Significant Impact. The following school is within 0.25 mi of the project limits: Barton Hill Elementary School, 423 North Pacific Avenue, San Pedro. No schools are known to be planned within 0.25 mi of the project limits. As discussed in Responses 3.1.8.1 a) and b) above, routine hazardous materials such as paint, solvents, and fuel would be used, handled, stored, disposed of, and transported during construction of the proposed project in accordance with applicable local, State, and federal regulations. Also, as previously discussed, operation of the proposed project does not involve the reasonably foreseeable potential for release of hazardous emissions or handling of acutely hazardous materials, as the transport of hazardous materials is subject to strict regulation. Refer also to Responses 3.1.8 a) and b) above. Routine maintenance activities during operation of the proposed project would comply with applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, operation of the proposed project would result in less than significant impacts related to the emissions or handling of hazardous waste or materials near existing or proposed schools. No mitigation is required.

d) Less Than Significant Impact. One parcel identified for a temporary construction easement (TCE) under the proposed project is included on the Cortese List pursuant to Government Code Section 65962.5. A site investigation would be required on this and any additional parcels identified for TCEs or partial acquisitions to identify potential hazards that may occur during project construction and perform more extensive subsurface investigations if deemed necessary, as specified in Project Feature PF-HAZ-4. With implementation of Project Feature PF-HAZ-4, potential impacts related to this listed parcel would be less than significant. With implementation of this project feature, potential impacts related to listed hazardous material sites would also be less than significant.

e) No Impact. The closest public-use airport to the project site is Long Beach Airport/Dougherty Field (LGB), which is approximately 8 mi northeast of the project site. Due to the distance of this airport from the proposed project and the fact that the proposed project is not within an airport land use plan area, implementation of the proposed project would not result in a safety hazard related to airport operations for people working or residing in the study area. No mitigation is required.

f) No Impact. There are no private airports or airstrips in the vicinity of the study area. Zamperini Field is a publicly owned airport located in Torrance, approximately 5 mi northwest of the study area, and is not served by commercial air traffic. As a result, the proposed project would not affect or be affected by aviation activities associated with private airports or airstrips. No mitigation is required.

g) Less Than Significant Impact. As described in Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities, the construction of the proposed project would result in temporary impacts to traffic circulation and pedestrian access in the project vicinity. Those impacts could include short-term closures of ramps and modifications to the existing facilities, as described in detail in Section 2.5.3. The temporary closures and detours may result in short-term effects on emergency response and evacuation along and in the vicinity of the project limits and arterials in the vicinity of SR-47. Specifically, emergency responders would need to use designated detour routes to get around ramp closures. This could result in increased travel times for emergency service providers. Similarly, in the event evacuations are required during the temporary facility closures or lane reductions, there could be delays for traffic evacuating from the area due to the detours and/or temporary reduction in available road capacity. Project Feature PF-TR-1, provided in Section 2.5.3.1, requires the preparation prior to construction and the implementation during construction of a Transportation Management Plan (TMP). Additionally, Project Feature PF-UES-2, provided in Section 2.4.2.1, would require coordination with emergency service providers for ramp or road closures. Collectively, these project features would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. With implementation of the identified project features, potential impacts related to emergency response times and plans would be less than significant.

h) No Impact. Wildland fires occur in geographic areas that contain the types and conditions of vegetation, topography, weather, and structure density susceptible to

risks associated with uncontrolled fires that can be started by lightning, improperly managed campfires, cigarettes, sparks from automobiles, and other ignition sources. The project limits and the surrounding areas are developed urban and suburban areas and do not include brush- and grass-covered areas typically found in areas susceptible to wildfires. As a result, the proposed project would not expose people or structures to a significant risk of loss, injury, or death associated with wildland fires. No impact would occur and no mitigation is required.

3.1.9 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☒	☐

CEQA Significance Determination for Hydrology and Water Quality

The potential for the proposed project to adversely impact hydrology and water quality was assessed in the *Stormwater Data Report* (December 2018) and in Sections 2.8, Hydrology and Floodplains, and 2.9, Water Quality and Storm Water Runoff, of this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. During construction of the proposed project, excavated soil would be exposed and there would be an increased potential for soil erosion compared to existing conditions. The total disturbed area under the proposed project measures 13.3 acres. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), concrete-related waste, sanitary waste, and trash and debris may be spilled or leaked during construction, potentially causing those pollutants of concern to be transported via storm runoff into receiving waters. As discussed in Section 2.12, Hazardous Waste/Materials, three parcels that are within the maximum disturbance limits of the Build Alternative may have contributed to soil and/or groundwater impacts as a result of leaking pipelines or past railroad activities. The proposed project would implement project features (described in Section 2.9.3) requiring compliance with applicable Los Angeles Regional Water Quality Control Board (LARWQCB) orders and National Pollutant Discharge Elimination System (NPDES) permits. Project Feature PF-WQ-1 requires the design, implementation, and maintenance of construction BMPs that would address the potential effects of soil erosion and pollutants of concern on receiving waters. Additionally, Project Feature PF-WQ-2 would ensure that if groundwater dewatering becomes necessary during construction, the proposed project would comply with the requirements of one of three orders, or any subsequent orders that apply to groundwater discharges to surface waters, depending on the nature of the

groundwater being discharged to surface waters within the coastal watersheds of Los Angeles and Ventura counties. Lastly, Project Feature HAZ-3 requires that supplemental site investigations, including soil and groundwater investigations, are performed at parcels proposed to be dedicated to Caltrans, prior to right-of-way certification. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment. If contamination is identified, a remediation plan will be prepared, implemented, and completed prior to right-of-way certification. Compliance with Project Features PF-WQ-1, PF-WQ-2, and PF-HAZ-3 would ensure that water quality impacts during construction of the proposed project would be less than significant. No mitigation is required.

The proposed project would result in a permanent increase in impervious surface area of 2.2 acres compared to the existing freeway facility. An increase in impervious area would increase the volume of runoff during a storm, which would more effectively transport pollutants to receiving waters. As indicated in Project Features PF-WQ-3 through PF-WQ-5 in Section 2.9.3, operation of the proposed project would be required to comply with the Caltrans NPDES Permit and would implement Caltrans-approved Treatment and Design Pollution Prevention BMPs to reduce the discharge of pollutants of concern to the maximum extent practicable (MEP). Based on compliance with these Caltrans requirements, as described in Project Features PF-WQ-3 through PF-WQ-5, water quality impacts associated with the proposed project would be less than significant. No mitigation is required.

b) Less Than Significant Impact. The proposed project involves making improvements to roadways and freeway interchanges in the project area. Implementation of the proposed project would not require the withdrawal of groundwater and, therefore, would not result in the direct lowering of the local groundwater table. Additionally, the proposed project would not interfere with groundwater recharge, as there are no existing municipal or domestic water supply reservoirs or groundwater percolation facilities within the project area. Additionally, Project Feature PF-WQ-2 would ensure that should groundwater dewatering become necessary during construction, the proposed project would comply with the requirements of one of three orders, or any subsequent orders that apply to groundwater discharges to surface waters, depending on the nature of the groundwater being discharged to surface waters within the coastal watersheds of Los Angeles and Ventura counties. As discussed in Section 2.12, Hazardous

Waste/Materials, Project Feature PF-HAZ-3 supplemental site investigations, including soil and groundwater investigations, are performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels. The site investigations will determine whether more extensive subsurface investigation will be needed. If deemed necessary, subsurface investigations will be performed according to the recommendations of the assessment. If contamination is identified, a remediation plan will be prepared, implemented, and completed prior to right-of-way certification. For these reasons, and with implementation of the applicable project features, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. A less than significant impact would occur and no mitigation is required.

c) and d) Less Than Significant Impact. There are no natural drainages within the disturbance limits of the proposed project. Erosion during project construction and operation would be addressed based on compliance with the applicable NPDES permit and Project Features PF-WQ-1 through PF-WQ-5. Additionally, the proposed project does not introduce any improvements that would change channel hydraulics or increase the risk of flooding and inundation. Implementation of the proposed project would require protection in-place, removal, replacement, or relocation of existing storm drain facilities within the project disturbance limits. With implementation of Project Feature PF-UES-1, during final design utility relocation plans would be prepared in consultation with the affected utility providers/owners for those utilities that would need to be relocated, removed, or protected in-place. Therefore, the proposed project does not include drainage modifications that would result in substantial erosion, siltation, or flooding on or off the project site.
No mitigation is required.

e) Less Than Significant Impact. Refer to Response 3.1.9.1 a). As described above, the proposed project would result in a permanent increase in impervious surface area of 2.2 acres compared to the existing freeway facility. However, implementation of Project Features PF-WQ-1 through PF-WQ-5 would require compliance with applicable LARWQCB orders and NPDES Permits, and would implement Caltrans-approved Treatment and Design Pollution Prevention BMPs to reduce the discharge of pollutants of concern to the MEP. Therefore, the proposed project would not

exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. No mitigation is required.

f) Less Than Significant Impact. Refer to Response 3.1.9.1 a). With implementation of Project Feature PF-HAZ-3, and Project Features PF-WQ-1 through PF-WQ-5, which would require compliance with applicable LARWQCB orders and NPDES Permits, and would implement Caltrans-approved Treatment and Design Pollution Prevention BMPs to reduce the discharge of pollutants of concern to the MEP, the proposed project would not substantially degrade water quality. No mitigation is required.

g) No Impact. The proposed project does not propose the construction of housing in a 100-year flood hazard area. Therefore, the proposed project would not result in impacts related to the placement of housing in the 100-year floodplain. No impact would occur and no mitigation is required.

h) No Impact. The proposed project does not propose the placement of any permanent structures within a 100-year flood hazard area. Therefore, the proposed project would not result in the impediment or redirection of flood flows within a 100-year flood hazard area. As a result, no impacts would occur and no mitigation measures are required.

i) Less Than Significant Impact. Portions of the project area are located within Zone X, which is outside the 100-year floodplain, but within the 0.2 percent annual chance floodplain (500-year flood). Additionally, the project area is not in an area subject to flooding from overtopping or dam or levee failure. The proposed project would result in the construction of roadway and interchange improvements within the project area. The purpose of the proposed project is to improve operational efficiency of the existing interchange and not to increase capacity. Therefore, the proposed project would not expose additional roadway users to the existing flood risks and would reduce the amount of time roadway users are exposed to these risks. Additionally, the proposed project would not construct habitable buildings within a designated flood area or an identified dam inundation area. Consequently, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. A less than significant impact would occur and no mitigation is required.

j) Less Than Significant Impact. A seiche is a standing wave in an enclosed or partially enclosed body of water (similar to the sloshing of water in a bathtub).

Seiches have been observed on larger lakes, reservoirs, harbors, and bays, and in smaller ocean areas that are substantially surrounded by land. Because the project site is located near the Los Angeles Harbor, there is potential that a seismic event could result in a seiche and tsunami. Similar to Response 3.1.9 i), because of the nature of the proposed project (interchange and roadway improvements that would improve the operational efficiency of the existing interchange), the proposed project would not expose additional roadway users to the existing seiche and tsunami risks and would reduce the amount of time roadway users are exposed to these risks. Therefore, impacts associated with this issue would be less than significant and no mitigation is required.

3.1.10 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

CEQA Significance Determinations for Land Use and Planning

The potential for the proposed project to result in adverse impacts related to land use and planning was assessed in Sections 2.1, Land Use, and 2.3, Community Impacts, in this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. The project limits are within an existing freeway with interchanges/ramps, retaining walls, noise barriers, and other structural features, and the proposed project would not introduce a new structural barrier that would divide or disrupt existing communities. Existing land uses in the northern part of the study area include transportation, communications, and utilities (port uses); open-space recreation; vacant; and education. Existing land uses in the southern part of the

study area include multi- and single-family residential, commercial, transportation, communications, and utilities uses. Partial acquisitions and TCEs would occur north of and adjacent to Knoll Drive, as well as south of Knoll Drive, between the proposed realigned WB on- and off-ramps and north of the existing SR-47 WB on-ramp. TCEs would also occur adjacent to and east of Front Street and Harbor Drive. Because most of the TCEs would be on vacant land or land currently being used for landscaping and parking lots adjacent to the existing SR-47 ROW, the temporary use of such land for construction activities would not adversely affect community character, divide existing land uses or existing communities, or create barriers between existing communities. A less than significant impact would occur and no mitigation is required.

b) Less Than Significant Impact. The proposed project would be consistent with the goals and policies in the City's General Plan and the Port Master Plan, as detailed in Table 2.1.5. The proposed project would not result in changes to existing land use patterns in the project area because SR-47 is an existing transportation facility in a highly developed area, and the proposed project would result in a limited amount of property acquisition. The proposed project would not require amendment to the City's General Plan. Additionally, the proposed project is located within the coastal zone and would require a Coastal Development Permit from the California Coastal Commission. Coastal Development Permits ensure compliance with the policies of Chapter 3 of the Coastal Act, which strive to protect coastal zone resources. Therefore, the proposed project is consistent with local plans and policies. No mitigation is required.

c) No Impact. Refer to Response 3.1.4.1 f), above, which indicates that the proposed project is not located within an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, no impact would occur. No mitigation is required.

3.1.11 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

CEQA Significance Determinations for Mineral Resources

The potential for the proposed project to result in adverse impacts related to mineral resources was assessed in Section 2.10, Geology/Soils/Seismic/Topography, in this environmental document. The following discussion is based on that analysis.

a) and b) No Impact. According to California's Division of Oil, Gas, and Geothermal Resources, there are six oil and gas wells in the community of San Pedro. All of the wells are inactive except for one that is idle. The idle well is located more than two miles southwest of project site. Therefore, the proposed project would have no impact.

The State Geologist is responsible for classifying and/or designating mineral deposits based on adopted criteria that address the resource development potential of a particular commodity. Areas are categorized into four mineral resource zones (MRZs) based on geologic factors. MRZ-2 identifies significant mineral deposits of a particular commodity and is therefore the most important category. There are no deposits in the project area or in the community of San Pedro that have been classified as MRZ-2 by the State Geologist.

As a result, the proposed project would not result in impacts on known mineral resources or resource extraction activities. No mitigation is required.

3.1.12 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

CEQA Significance Determinations for Noise

The potential for the proposed project to result in significant noise impacts was assessed in the *Noise Study Report* (NSR; April 2018), the *Noise Abatement Decision Report* (NADR; December 2018), and Section 2.14, Noise, in this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. Noise levels during construction of the proposed project may impact noise-sensitive receptors. Typical construction noise levels may reach 86 A-weighted decibels (dBA) maximum instantaneous noise level (L_{max}) or higher at a distance of 50 feet from the noise sources. The following project feature, described in detail in Section 2.14.3, would minimize construction noise impacts under the proposed project:

> **PF-N-1:** The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, "Noise Control." The nighttime noise level from the contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., will not exceed 86 A-weighted decibels (dBA) one-hour A-weighted equivalent continuous sound level ($L_{eq}(h)$) at a distance of 50 feet. In addition, the contractor will equip all internal combustion engines with a manufacturer-recommended muffler and will not operate any internal combustion engine on the job site without the appropriate muffler.

Therefore, short-term noise impacts as a result of project construction are considered less than significant.

However, because the proposed project would not result in any substantial increases in permanent noise levels in the study area, no significant permanent noise impact would occur under CEQA. Noise abatement measures, including noise barriers, have been evaluated to minimize the noise impacts. However, based on public input from receptors that would benefit from a noise barrier, implementation of the noise abatement would not occur. As stated above, the proposed project would not result in any substantial increases in permanent noise levels in the study area; therefore, long-term noise impacts as a result of the proposed project are considered less than significant.

b) Less Than Significant Impact. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernable but without the effects associated with the shaking of a building. Building damage from ground vibration is not a factor for normal transportation sources, with the occasional exception of blasting and pile driving during construction. Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to areas within approximately 100 ft of the vibration source. The closest sensitive receptors are approximately 50 feet from the construction areas for the proposed project; however, because project construction does not include blasting or pile driving, vibration impacts during construction would be less than significant. In addition, compliance with local Noise Ordinances and the

Caltrans Standard Specifications required in Project Feature PF-N-1 in Section 2.14 would also minimize vibration impacts. Therefore, groundborne vibration and noise impacts are considered less than significant.

Groundborne vibration from vehicles driving on the project facilities would be similar to existing conditions. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible. Streets surrounding the project site are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles would make it unusual for on-road vehicles to cause groundborne noise or vibration problems. No such vehicular vibration impacts would occur; therefore, noise and vibration impacts would be less than significant. No mitigation is required.

c) Less Than Significant Impact. The noise level increases along SR-47 during operation of the proposed project, as compared to existing conditions, are described in Section 2.14, Noise.

As indicated in Section 2.14.1.1, the CEQA noise analysis is a strictly baseline versus build comparison to determine whether noise increases brought about by the proposed project are significant. It is independent of the 23 CFR 772 analysis contained in Section 2.14. Significance is determined by examining the setting of the noise impact and how large or perceptible any noise increase would be in the given area. Considerations include the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

The receptor locations and modeled noise were examined to determine if the with-project worst-hour noise level would be substantially higher than the Existing Baseline condition. Because an increase of 5 dBA generally represents a noticeable change in sound level, any modeled increase over 5 dBA was identified for a closer look.

Of the 39 modeled receptors, 12 receptors under the proposed project would approach or exceed the NAC. No receptors would experience a substantial noise increase of 12 dBA, which is generally accepted as significant for the purposes of the CEQA analysis. The receptor locations listed below would be or would continue to be exposed to noise levels that approach or exceed the NAC under the Build Alternative.

Receptors R-4, R-5, R-6, and R-7 represent an existing single-family residence and an existing sports park located along Viewland Place and Center Street on the westbound side of SR-47. Two noise barrier locations (NB No. 1 and NB No. 2) were evaluated separately to shield these receptors and to compare the effectiveness of the two barriers. NB No. 1 was determined to be not feasible because the barriers were not capable of reducing noise levels by 5 dBA or more and NB No.2 was determined to not be reasonable because noise barrier construction cost exceeds the total reasonable allowance. Receptors R-4, R-5 and R-6, R-7 do not have reasonable and feasible noise barriers.

Receptors R-15, R-20, R-21, R-22, and R-23 represent existing single-family residences located along Mesa Street and Amar Street on the eastbound side of SR-47. Three noise barriers (NB No. 3, NB No. 3a, NB No. 367) were evaluated separately to shield these receptors and to compare their effectiveness. While NB No. 3a and NB No. 367 were determined to be feasible and reasonable, NB No. 3 was determined to not be reasonable because noise barrier construction cost exceeds the total reasonable allowance. NB No. 3a and NB No. 367 were modeled to shield residences representing Receptors R-22 and R-23. NB No. 3a and NB No. 367 and would minimize operational noise impacts at receptors R-22 and R-23. Receptors R-15, R-20 and R-21 do not have reasonable and feasible noise barriers.

Receptor R-28 represents existing multifamily residences located along Amar Street on the eastbound side of SR-47. Two noise barriers (NB No.6 and NB No. 367) were evaluated separately to shield this receptor and to compare their effectiveness. NB No. 6 and NB No. 367 were determined to be feasible and reasonable and would minimize operational noise impacts at receptor R-28.

Receptor R-31 represents existing multifamily residences located along Palos Verdes Street on the eastbound side of SR-47. Two noise barriers (NB No. 7 and NB No. 367) were evaluated separately to shield this receptor and to compare their effectiveness. While NB No. 367 was determined to be feasible and reasonable, NB No. 7 was determined to not be reasonable because noise barrier construction cost exceeds the total reasonable allowance. NB No. 367 and would minimize operational noise impacts at receptor R-31.

Receptor R-34 represents the outdoor use area associated with existing multifamily residences located along Harbor Boulevard on the eastbound side of SR-47, between the Harbor Boulevard eastbound loop on-ramp and Harbor Boulevard. Two noise

barrier locations (NB No. 4 and NB No. 5) were evaluated separately to shield this receptor and to compare the effectiveness of the two barriers. Both noise barriers were determined to be not feasible because the barriers were not capable of reducing noise levels by 5 dBA or more. Receptor R-34 does not have reasonable and feasible noise barriers.

Although some noise barriers were found to be feasible and reasonable, based on public input from receptors that would benefit from a noise barrier, implementation of noise abatement would not occur. However, while not all the identified receptors would receive noise abatement, because these noise increases do not reach 12 dBA (generally accepted as significant for the purposes of the CEQA analysis), these increases are determined to be less than significant.

d) Less Than Significant Impact. Refer to Response 3.1.12.a), above, which indicates that noise levels during construction of the proposed project may temporarily impact sensitive receptors. However, with implementation of Project Feature PF-N-1, the control of noise from construction activities would conform to the Caltrans Standard Specifications, and nighttime noise levels from the contractor's operations (between the hours of 9:00 p.m. and 6:00 a.m.) would not exceed the 86 dBA one-hour A-weighted equivalent continuous sound level ($L_{eq}(h)$) at a distance of 50 ft. In addition, the contractor would equip all internal combustion engines with a manufacturer-recommended muffler and would not operate any internal combustion engine on the job site without the appropriate muffler. Therefore, construction noise impacts under the proposed project would be less than significant.

e) No Impact. The closest public airport to the project site is Zamperini Field, which is approximately 5 mi northwest of the project site. Due to the distance of this airport from the proposed project and the fact that the proposed project is not within an airport land use plan area, the proposed project would not result in aviation-related noise impacts. No mitigation is required.

f) No Impact. There are no private airports or airstrips in the project vicinity. As a result, the proposed project would not affect or be affected by aviation noise levels associated with private airports or airstrips. No mitigation is required.

3.1.13 Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

CEQA Significance Determinations for Population and Housing

The potential for the proposed project to result in adverse impacts related to population and housing was assessed in Sections 2.2, Growth, and 2.3, Community Impacts, in this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. As discussed in detail in Section 2.2, the potential growth-related impacts of the proposed project were considered in the context of the first-cut screening analysis approach to assess the potential for growth-inducing effects. That analysis determined that the proposed project would:

- Not provide new transportation facilities or create new access points to areas not previously accessible and, therefore, would not result in changes in accessibility to the transportation system in the area.
- Accommodate existing and planned growth and would not influence growth beyond what is currently planned.
- Would not influence growth beyond those projects that are currently planned for the area and would not change the rate, type, or amount of reasonably foreseeable growth in the City of Los Angeles.

No impact would occur and no mitigation is required.

b) and c) No Impact. The proposed project would result in the reconfiguration of an existing transportation facility. It would not result in the displacement of any residents or existing housing. No impact would occur and no mitigation is required.

3.1.14 Public Services

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

CEQA Significance Determinations for Public Services

The potential for the proposed project to impact public services and facilities is assessed in Sections 2.1, Land Use, and 2.4, Utilities and Emergency Services, in this environmental document. The following discussions are based on those analyses.

a) i) and ii) Less Than Significant Impact. The Los Angeles Fire Department provides fire protection and emergency medical/paramedic services and the Los Angeles Police Department provides police protection in the City of Los Angeles, including the project area. As described in Response 3.1.16.1 a), construction of the proposed project would result in temporary impacts to traffic circulation. Those impacts could include short-term ramp closures and modifications to the existing facilities that could result in short-term effects on emergency response (fire and police) times in the project vicinity and on arterials in the vicinity of SR-47. Specifically, emergency responders would need to use designated detour routes to get around freeway ramp closures. This could result in increased travel times for emergency service providers. Project Feature PF-T-1, provided in Section 2.5 in the

environmental document, requires the preparation and implementation of a TMP prior to and during construction. Additionally, Project Feature PF-UES-2 would require coordination with emergency service providers regarding ramp or road closures. Collectively, these project features would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes, and access to, through, and around active construction areas.

During operation, the proposed project would reduce traffic congestion and result in decreased travel times on SR-47. These improvements in traffic flow are likely to improve emergency response times within the project limits. Therefore, operation of the proposed project would not result in adverse effects on the delivery of emergency services in the long term.

a) iii) No Impact. The proposed project consists of infrastructure improvements to existing roadways and interchanges, and implementation of the proposed project would not result in an increase in the local population or the need for new or physically altered school facilities. Without an increase in the local population, the proposed project would not result in increased demand on schools and no impact would occur. No mitigation is required.

a) iv) Less Than Significant. The proposed project consists of infrastructure improvements to existing roadways and interchanges, and implementation of the proposed project would not result in an increase in the local population or the need for new or physically altered recreational facilities. Without an increase in the local population, there would be no increase in demand on parks associated with the proposed project. Additionally, the shifted Knoll Drive alignment would be constructed first to ensure continuous access to the Knoll Hill Little League fields during construction. Therefore, impacts associated with this issue would be less than significant. No mitigation is required.

a) v) No Impact. The proposed project consists of infrastructure improvements to existing roadways and interchanges, and implementation of the proposed project would not result in an increase in the local population or the need for new or physically altered public facilities. Without an increase in the local population, the proposed project would not result in increased demands on other public facilities such as library, government, or community support services, and impacts would not occur. No mitigation is required.

3.1.15 Recreation

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

CEQA Significance Determinations for Recreation

The potential for the proposed project to adversely impact recreational resources was assessed in Section 2.1, Land Use, in this environmental document. The following discussions are based on the findings of that analysis.

a) No Impact. The proposed project proposes modifications to the existing SR-47 ramps and arterial interchanges to accommodate existing and projected growth within the region. The proposed project would not result in the construction of residential or other land uses that would attract visitors to parks within the project area or to regional parks and other recreation facilities. The proposed project also would not provide new or increased access to existing recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. As a result, the proposed project would not contribute to substantial or accelerated deterioration of neighborhood and regional parks or other recreational facilities. No impact would occur and no mitigation is required.

b) Less Than Significant Impact. To accommodate the WB ramp realignments, the proposed project would require parcel acquisitions resulting in the permanent closure of the existing Knoll Hill Dog Park. The proposed project itself does not include the construction of new recreational facilities or require the expansion of existing recreational facilities. Therefore, the proposed project would not result in adverse effects related to constructing new or expanded recreation facilities. No mitigation is required.

3.1.16 Transportation/Traffic

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

CEQA Significance Determinations for Transportation/Traffic

The potential for the proposed project to result in adverse traffic impacts was assessed in the *Traffic Study Report* (January 2018) and in Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities, in this environmental document. The following discussions are based on those analyses.

a) Less Than Significant Impact. The study area intersections, arterial roadways, and freeway segments fall within two jurisdictions: Caltrans and City of Los Angeles. The Caltrans Transportation Concept Report for SR-47 requires a level of service

(LOS) D during peak periods. Within Los Angeles, a transportation impact at a signalized intersection is deemed significant in accordance with the criteria shown in Table 2.5.1 in Section 2.5.

Tables 2.5-2 through 2.5-7 in Section 2.5 of this environmental document show the LOS for the Build Alternative and the No Build Alternative in the a.m. and p.m. peak hours under the Existing Baseline (2015), Opening Year (2023), and Design Year (2045) conditions. As shown, for most segments and ramps, the Build Alternative performs better than the No Build Alternative in terms of LOS in both 2023 and 2045. Additionally, the Build Alternative is projected to exceed ramp storage capacity in fewer lanes than the No Build Alternative, but it would exceed capacity in more lanes than the Existing Baseline condition, which has adequate storage for all lanes.

The Front Street and SR-47 WB ramps/WBCT Gate 2 intersection would operate at LOS C in both the a.m. and p.m. peak hours in the Opening Year (2023) scenario[1]. Compared to the No Build Alternative the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would improve to LOS C from LOS D in the a.m. peak hour and remain at LOS D in the p.m. peak hour in the Opening Year (2023) scenario. The Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection under the Build Alternative—Opening Year (2023) would be degraded when compared to Existing Baseline conditions. The Front Street and SR 47 WB ramps/WBCT Gate 2 intersection would operate at LOS E in the a.m. peak hour LOS D in the p.m. peak hour[1]. Similar to the Opening Year (2023), compared to the No Build Alternative the Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would improve to LOS E from LOS F in the a.m. peak hour and to LOS D from LOS F in the p.m. peak hour.

The Build Alternative is consistent with the applicable local General Plans and RTPs to reduce congestion and improve operations within the project limits. In addition to the ramp relocations and improvements, the Build Alternative includes design features to improve the intersections between the freeway ramps and the local arterial streets, including creating a controlled intersection that accommodates pedestrians,

[1] A comparison to the No Build Alternative is not provided because the Front Street and SR 47 WB ramps/WBCT Gate 2 intersection does not exist under the No Build scenario.

bicycles, and Americans with Disabilities Act (ADA) accessibility. No mitigation is required.

b) Less Than Significant. In the Opening Year (2023), the SR-47 WB off-ramp to Harbor Boulevard freeway ramp segment is projected to operate at LOS E during the p.m. peak period under both the Build Alternative and the No Build Alternative. The ramp modifications proposed by the Build Alternative under 2023 conditions would result in a reduction in the number of weaving segments and merge/diverge segments. Overall, the Build Alternative—Opening Year (2023) would improve traffic operations within the study area compared to the No Build Alternative—Opening Year (2023) for both the a.m. and p.m. peak hours, although LOS would remain the same under the No Build Alternative—Opening Year (2023) and Build Alternative—Opening Year (2023). Compared to Existing Baseline conditions, the Build Alternative—Opening Year (2023) would result in the deterioration of one merge/diverge segment operating at LOS E during the p.m. peak hour. The Build Alternative—Design Year (2045) LOS would remain the same as with the No Build Alternative—Design Year (2045). When compared to Existing Baseline conditions, the Build Alternative—Design Year (2045) would result in the deterioration of both ramp segments, with the SR-47 WB off-ramp to Harbor Boulevard operating at LOS F during both peak periods. However, given that under the No Build Alternative—Design Year (2045), the SR-47 WB off-ramp to Harbor Boulevard would also operate at LOS F during both peak periods, this degradation cannot be attributed to the Build Alternative.

As described in Response 3.1.16 a), compared to the No Build Alternative the Build Alternative at Front Street/Harbor Boulevard and SR-47 EB ramps/Swinford Street intersection would improve in LOS. Therefore, the Build Alternative would not conflict with the Los Angeles County CMP. No mitigation is required.

c) No Impact. The proposed project consists of roadway and freeway interchange improvements. The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Therefore, no impacts would occur and no mitigation is required.

d) No Impact. The Build Alternative would be designed, constructed, and operated consistent with the Caltrans *Highway Design Manua*l (2017) and other applicable standards and specifications for ramps, arterial intersections, retaining walls, noise

barriers, drainage features, and utility relocations/modifications. Pedestrian and bicycle facility improvements would be required to meet ADA requirements for accessibility. No additional access or roadway improvements have been proposed that would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, the Build Alternative would not include any hazardous design features or incompatible uses. No mitigation is required.

e) Less Than Significant Impact. As described earlier in Responses 3.1.14.1 a) i) and 3.1.14.1 a) ii), construction of the Build Alternative would result in temporary impacts to traffic circulation, including emergency services. Those impacts would be avoided and/or minimized based on implementation of the TMP during construction, as required in Project Feature PF-T-1. Additionally, Project Feature PF-UES-2 would require ramp or road closure coordination with emergency service providers. Collectively, these project features would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas.

In the long term, the Build Alternative would not reduce the number of access points to/from the freeway facility, but it would reduce the number of weaving segments and merge/diverge segments. The improvements in the Build Alternative are likely to improve emergency response times in and around the SR-47 interchange during operation. Therefore, the Build Alternative would not result in adverse effects on the delivery of emergency services in the long term. Impacts would be less than significant, and no mitigation is required.

f) Less Than Significant Impact. As discussed in Section 2.1, Land Use, in this environmental document, the Build Alternative would not conflict with adopted policies, plans, or programs supporting alternative transportation modes. The SR-47 mainline facility currently prohibits access by bicycles and pedestrians, and that access restriction would remain with implementation of the Build Alternative. The ramp and arterial improvements in the Build Alternative would improve traffic operations overall, which would also benefit public and private buses. The improvements to arterials would include updated pedestrian and bicycle facilities that are consistent with ADA requirements. Existing bike lanes would be updated at both the WB ramp and EB ramp intersections to implement Caltrans “Complete Streets” design, including bike lane buffers for right-turn movements. ADA-compliant curb ramps and protected crosswalks are proposed for all directions of the new WB ramp

intersection. ADA-compliant curb ramps and protected crosswalks are also proposed along three directions of the existing EB ramp intersection. As in the existing condition, there is no crosswalk on the south side of the EB ramp intersection. Construction of the Build Alternative would result in temporary impacts to traffic circulation, including emergency services. Those impacts would be avoided and/or minimized via implementation of the TMP during construction, as required by Project Feature PF-T-1, and may involve coordination with transit providers. As a result, the Build Alternative would not conflict with alternative transportation modes. No mitigation is required.

3.1.17 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

CEQA Significance Determinations for Tribal Cultural Resources

The potential for Build Alternative to adversely impact Tribal Cultural Resources was assessed in the HPSR (2018), the attachments to the HPSR, Section 2.7, Cultural Resources; and by adhering to AB 52. AB 52, which went into effect on July 1, 2015, introduced a new class of resources—Tribal Cultural Resources—and proposed that it be included in the CEQA analysis. The California Office of Administrative Law approved the changes to the CEQA Checklist to incorporate the Tribal Cultural Resources questions on September 27, 2016. The proposed project is subject to the requirements of AB 52, the CEQA Tribal Consultation law. As such, in addition to

the initial Native American coordination, consultation under AB 52 was subsequently conducted by Caltrans on December 26, 2017. No initial response from the tribes was received as a result of the project notification letter. The tribes and representatives contacted include the Barbareño/Ventureño Band of Mission Indians (Julie Lynn Tumamait-Stenslie), Barbareño/Ventureño Band of Mission Indians (Patrick Tumamait), Barbareño/Ventureño Band of Mission Indians (Eleanor Arrellanes), Barbareño/Ventureño Band of Mission Indians (Raudel Joe Banuelos, Jr.), Fernandeño Tataviam Band of Mission Indians (Rudy Ortega Jr.), Gabrieleno Band of Mission Indians – Kizh Nation (Andrew Salas), Gabrieleno/Tongva San Gabriel Band of Mission Indians

(Anthony Morales), Gabrielino/Tongva Nation (Sandonne Goad), Gabrielino-Tongva Tribe (Linda Candelaria), Gabrielino-Tongva Tribe (Charles Alvarez), Kern Valley Indian Community (Robert Robinson), Kitanemuk & Yowlumne Tejon Indians (Delia Dominguez), San Fernando Band of Mission Indians (John Valenzuela), San Manuel Band of Mission Indians (Lee Clauss), San Manuel Band of Mission Indians (Lynn Valbuena), Santa Ynez Band of Chumash Indians (Kenneth Kahn), Soboba Band of Luiseño Indians (Joseph Ontiveros). A follow-up email was sent to the tribes or a follow-up phone call was made to the representatives. The only responses received from the tribal contacts were from Patrick Tumamait, Andrew Salas, Delia Dominguez, Jessica Mauck (on behalf of Lynn Valbuena). Mr. Tumamait commented that he has no concerns about the project since it is down in Los Angeles County. Mr. Tumamait said to contact him regarding the project only if recommended by Andrew Salas. Mr. Salas indicated that the proposed project is located within known village area previously occupied by his people and said that he is happy to share information that he has regarding the village sites with Caltrans, if requested, and requests monitoring by one of their qualified tribal monitors. Ms. Dominguez stated that she has no comments on the project due to her group's location up in the Bakersfield area. Ms. Mauck responded to LSA via email, stating that the project is outside of Serrano territory and, as such, San Manuel Band of Mission Indians does not have any comments on the project. Further detail of the tribal coordination process subject to the requirements of AB 52 can be found in Chapter 4, Comments and Coordination.

a) and b) Less Than Significant Impact. The HPSR determined that all the State-owned resources (built-environment and archaeological resources) within the project APE are exempt from evaluation because they meet the criteria set forth in the Section 106 PA, Attachment 4 (Properties Exempt from Evaluation), or were previously determined not eligible for inclusion in the National Register and/or

registration as a California Historical Landmark. Therefore, a less than significant impact would occur to historical resources pursuant to State CEQA Guidelines Section 15064.5. No mitigation is required.

In the event that previously unknown buried cultural materials and human remains are encountered during construction, Project Features PF-CR-1 and PF-CR-2, provided in Section 2.7, would be implemented. Additionally, Measures CR-3 and CR-4 would be implemented to involve the Kizh Nation in cultural training and supervised field spot checks prior to and during construction. With compliance with Project Features PF-CR-1 and PF-CR-2 and Measures CR-3 and CR-4, provided in Section 2.7.3, potential impacts to previously unknown cultural resources would be less than significant.

3.1.18 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

CEQA Significance Determinations for Utilities and Service Systems

The potential for the proposed project to adversely impact utilities and service systems was assessed in Section 2.4, Utilities and Emergency Services. The following discussion is based on that analysis.

a), b), and e) No Impact. The proposed project would not generate wastewater or discharge wastewater to the area sewer system. As a result, the proposed project would not exceed wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities, or result in the need for a determination by a wastewater treatment provider that it has adequate capacity to serve the proposed project. No mitigation is required.

c) Less Than Significant Impact. The proposed project would include new storm drain facilities that would be installed within the project disturbance footprint. Additionally, implementation of the proposed project would require protection in-place, removal, replacement, or relocation of existing utility facilities, including storm drain pipelines, within the project disturbance limits. Table 1.6 in Chapter 1 provides a list of the potential utility relocations that could occur. Project Feature PF-UES-1 requires that, during final design, utility relocation plans be prepared in consultation with the affected utility providers/owners for those utilities that would need to be relocated, removed, or protected in-place. While the proposed project would result in the construction of new storm water drainage facilities, as previously described, these facilities would be installed within the project disturbance footprint and are analyzed in this environmental document. No new storm water drainage facilities are required to be constructed off site, nor would any expansion of off-site facilities be required. Adherence to Project Feature PF-UES-1 would ensure that impacts would be less than significant. No mitigation is required.

d) Less Than Significant Impact. The use of water during project construction would be limited to water trucked to the site for dust control. The amount of water used during construction would be minimal. The use of water during project operations would be limited to areas in which new landscaping requires short-term watering while the plant material becomes established and areas in which limited use of water for landscaping requires permanent watering. The amount of landscaping provided in the proposed project would not differ substantially from the existing amount of landscaping. Therefore, the amount of water needed for landscaping would be approximately the same as the existing demand. As a result, the proposed project would not require the water districts serving the study area to provide new or

expanded entitlements to meet the need for water during construction and operation of the proposed project, and impacts associated with this issue would be less than significant. No mitigation is required.

f) Less Than Significant Impact. During project construction, two types of waste materials would be collected: vegetation, other plant material, and some excess soils; and solid waste, such as concrete, asphalt, and wood. The waste collected during construction would be properly disposed of at an existing landfill or recycled. The amount of waste that would be generated during construction of the proposed project would be limited and would occur only during the construction period. That amount of waste would be only a very small amount of the total waste disposed of or recycled at area recycling facilities and landfills on both a daily and annual basis. Therefore, the amount of waste generated during construction of the proposed project is anticipated to be accommodated by the existing recycling and landfill facilities in Los Angeles County.

The waste collected during operation of the proposed project would be properly disposed of at an existing landfill or recycled. The amount of waste that would be generated during operation of the proposed project would be a very small amount of the total waste disposed of or recycled at area recycling facilities and landfills on both a daily and annual basis. Therefore, the amount of waste generated during operation of the proposed project is anticipated to be accommodated by the existing recycling and landfill facilities in Los Angeles County.

Because the amount of waste generated during construction and operation of the proposed project is anticipated to be accommodated by the existing recycling and landfill facilities in Los Angeles County, impacts associated with this issue would be less than significant. No mitigation is required.

g) Less Than Significant Impact. The proposed project consists of improvements to an existing roadway and interchange system. Operation of the proposed project would not generate any solid wastes. During construction, some construction waste would be generated. The proposed project would be required to comply with all applicable local, State, and federal solid waste disposal standards. Adherence to these solid waste requirements and standards would ensure that impacts would be less than significant. No mitigation is required.

3.1.19 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant Impact. The potential for the proposed project to result in significant impacts to biological or cultural resources, specifically, is discussed in Sections 2.7, 2.10, 2.11, 2.15, 2.16, 2.17, and 2.18 in this environmental document. The proposed project would not degrade the quality of the environment or permanently impact any animal or plant species or associated habitat. The potential for temporary construction-related impacts to habitats for overwintering monarch butterflies and for nesting birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code would be avoided with implementation of Project Feature PF-BIO-1 and Measure BIO-2. No wetlands, rivers, streams, or lakes are present within the BSA. Additionally, with implementation of the Statewide Construction General Permit described in Project Feature PF-WQ-1 in Section 2.9,

the proposed project will have no impacts on jurisdictional and nonjurisdictional waters.

Based on the results of the HPSR (August 2018) and the attachments to that report, it was determined that one cultural resource within the APE is eligible for inclusion in the National Register and is listed in California Register. However, the Build Alternative would not result in an adverse change on the Vincent Thomas Bridge, nor would it indirectly alter the setting of the bridge in a way that affects its ability to convey its historic significance. All other cultural resources within the APE do not appear to be eligible for inclusion in the National Register, do not qualify as historical resources pursuant to CEQA, or are exempt per the Section 106 PA. In addition, it has been determined that a finding of No Historic Properties Affected is appropriate. However, there is a potential to encounter unknown buried cultural resources or archaeological materials within the project disturbance limits during construction of the Build Alternative. In the event that previously unknown buried cultural materials are encountered during construction, compliance with Project Feature PF-CR-1 and Measure CR-2, provided in Section 2.7, would avoid and/or minimize potential impacts to previously unknown cultural resources.

To avoid impacts to paleontological resources that may be present where excavation may occur in areas of undisturbed soils, a PMP (detailed in Measure PAL-1, provided in Section 2.11 of this environmental document) would be developed during the final design phase of the proposed project and implemented during the construction phase of the proposed project.

b) Less Than Significant Impact. As discussed in Section 2.20, Cumulative Impacts, in this environmental document, several transportation projects may be under construction and operation at the same time as the Build Alternative. However, the Build Alternative would result in improved operating conditions within and around the SR-47 interchange compared to the No Build Alternative, and would not contribute to cumulative adverse effects to other resource areas. Therefore, the impacts of the Build Alternative are not considered cumulatively considerable and are less than significant.

c) Less Than Significant Impact. As discussed in Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.9, 2.10, 2.12, 2.13, and 2.14 in this environmental document, the proposed project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Furthermore, the proposed project

would improve traffic operations within and around the SR-47 interchange. This would reduce traffic delay, thereby reducing travel time and improving the human environment.

3.2 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation.[1] In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.[2] The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as

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1 United States Environmental Protection Agency. 2017. *United States Greenhouse Gas Inventory Report: 1990–2014* (last updated February 23, 2017). Website: https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014.

2 California Air Resources Board (CARB). 2017. California Greenhouse Gas Emission Inventory. 2017 Edition. Website: https://www.arb.ca.gov/cc/inventory/data/data.htm.

adjusting transportation design standards to withstand more intense storms and higher sea levels).

3.2.1 Regulatory Setting

This section outlines federal and State efforts to comprehensively reduce GHG emissions from transportation sources.

3.2.1.1 Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.[1] This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability."[2] Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

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1 Federal Highway Administration (FHWA). 2017. Sustainability (last updated October 19, 2017). Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/.[1]

2 FHWA. Sustainable Highways Initiative. Website: https://www.sustainablehighways.dot.gov/overview.aspx.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

- **The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR):** With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.
- **Energy Policy Act of 2005 (109th Congress H.R.6 [2005–2006]):** This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.
- **Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards:** This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.
- **Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 74 *Federal Register* 52117 (October 8, 2009):** This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.
- **Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, 80 Federal Register 15869 (March 2015):** This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by

reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous executive orders to ensure agency operations and facilities prepare for impacts of climate change. This order revokes Executive Order 13514.

The USEPA's authority to regulate GHG emissions stems from the United States Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the USEPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing act and the USEPA's assessment of the scientific evidence that form the basis for the USEPA's regulatory actions.

The USEPA, in conjunction with the National Highway Traffic Safety Administration (NHTSA), issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010[1] and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, the USEPA, and CARB will decide on CAFE and GHG emissions standard stringency for model years 2022 through 2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, USEPA finalized its mid-term review in January 2017, affirming that the target fleet average

[1] National Highway Traffic Safety Administration. CAFE – Fuel Economy. Website: https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy

of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered the USEPA to reopen the review and reconsider the mileage target.[1,2]

NHTSA and the USEPA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO2 emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018 through 2027 vehicles.

Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

3.2.1.2 State

With the passage of legislation, including State Senate and Assembly Bills and Executive Orders, California has been innovative and proactive in addressing GHG emissions and climate change.

- **Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002:** This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year.
- **Executive Order S-3-05 (June 1, 2005):** The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.
- **Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006:** AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05 while further mandating that ARB create a

1 NBC News. 2017. Website: http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256.

2 Federal Register 14671. Website: https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse.

scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

- **Executive Order S-20-06 (October 18, 2006):** This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.
- **Executive Order S-01-07 (January 18, 2007):** This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015 and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.
- **Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions:** This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the *State CEQA Guidelines* for addressing GHG emissions. The amendments became effective on March 18, 2010.
- **Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection:** This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.
- **Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan:** This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.
- **Executive Order B-16-12 (March 2012):** This EO orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.
- **Executive Order B-30-15 (April 2015):** This EO establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order

to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all State agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reduction targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMT CO_2e). Finally, it requires the Natural Resources Agency to update the State's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

- **Senate Bill 32, (SB 32) Chapter 249, 2016:** This bill codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

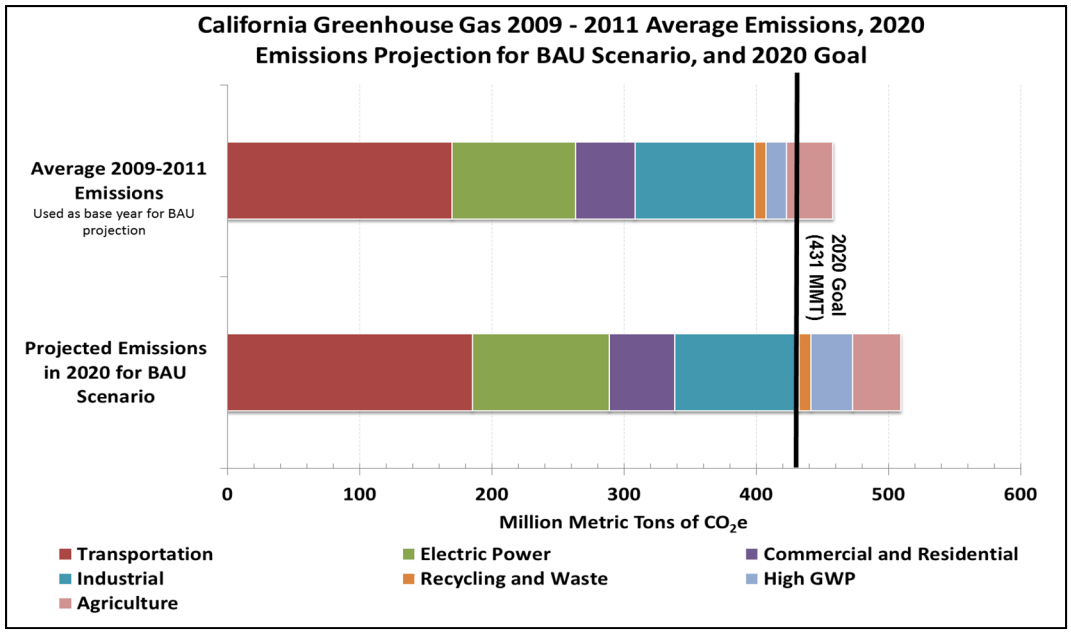
3.2.2 Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, ARB released the GHG inventory for California.[1] ARB is responsible for maintaining and updating California's GHG Inventory per Health and Safety Code Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

[1] CARB. 2018. California Greenhouse Gas Emission Inventory. Released July 2018. Website: https://www.arb.ca.gov/cc/inventory/data/data.htm.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided on Figure 3-1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists CARB in demonstrating progress toward meeting the 2020 goal of 431 MMT CO_2e.[1] The 2018 edition of the



Source: California Air Resources Board. Greenhouse Gas Inventory. Website: https://www.arb.ca.gov/cc/inventory/data/bau.htm

Figure 3-1: 2020 Business as Usual (BAU) Emissions Projection (2014 Edition)

GHG emissions inventory found total California emissions of 429 MMT CO_2e for 2016.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery.

[1] The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4).

The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMT CO_2e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMT CO_2e.

3.2.3 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[1] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (*State CEQA Guidelines* Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best-faith effort to describe the potential GHG emissions related to the proposed project.

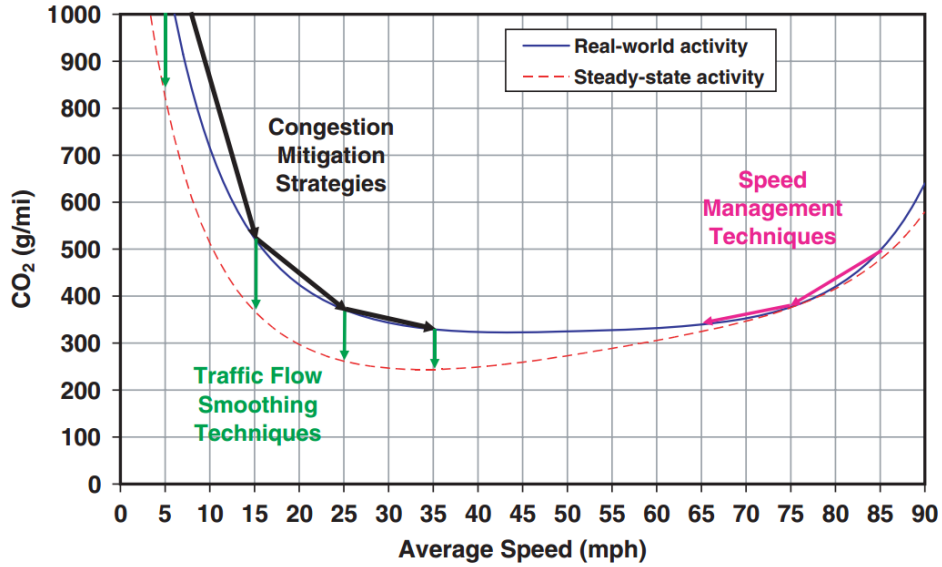
3.2.3.1 Operational Emissions

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued concurrently.

[1] This approach is supported by the AEP (*Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* [March 5, 2007]), as well as by the South Coast Air Quality Management District (*Chapter 6: The CEQA Guide* [April 2011]) and the United States Forest Service (*Climate Change Considerations in Project Level NEPA Analysis* [July 13, 2009]).

FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that the State of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO_2 from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour [mph]) and speeds over 55 mph; the most severe emissions occur from 0–25 mph (see Figure 3-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO_2, may be reduced.



Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside (May 2010). Website: http://uctc.berkeley.edu/research/papers/846.pdf.

Figure 3-2: Possible Use of Traffic Operation Strategies in Reducing On-Road CO_2 Emissions

SCAG's 2016 RTP/SCS complies with the emission reduction targets established by CARB and meets the requirements of SB 375 (as codified in Government Code §65080(b) et seq.) by achieving the per-capita GHG emission reductions relative to 2005 of 8 percent by 2020 and 18 percent by 2035, which meets or exceeds the targets set by CARB. As required by SB 375, this SCS outlines growth strategies that better integrate land use and transportation planning and help reduce the state's GHG emissions from cars and light trucks. The proposed project is listed in the 2016 RTP/SCS (Project ID: 1120007) as well as the 2017 Federal Transportation Improvement Program (FTIP), and those project listings can be found in Appendix C. The purpose of the proposed project is to (1) modify the existing on- and off-ramps to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas

Bridge and Front Street/Harbor Boulevard interchange; and (2) improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community. The proposed project would address congestion and enhance freeway operations as follows:

- Increase the capacity of existing ramps
- Improve operational deficiencies of merge, diverge, and weaving areas
- Improve operational deficiencies of intersection areas

The proposed project would be consistent with the following goals listed in the 2016 RTP/SCS:

- Maximize mobility and accessibility for all people and goods in the region.
- Preserve and ensure a sustainable regional transportation system.
- Maximize the productivity of the region's transportation system.

The proposed project as part of an overall regional plan, is expected to contribute the region with its overall goals to reduce vehicle-related GHGs by improving operational efficiency and traffic flow, thereby reducing emissions. This is consistent with the RTP/SCS's identified strategies to manage congestion by maximizing the current system and ensuring it operates with maximum efficiency and effectiveness.

The 2016 RTP/SCS commits $6.9 billion toward transportation demand management (TDM) strategies and $9.2 billion for transportation systems management (TSM) improvements in the region. Both TSM and TDM elements (i.e., ramp metering, and improved pedestrian and bicycle facilities and ADA accessibility) are included in the proposed project or are already utilized in the project area. The ramp and arterial improvements as part of the proposed Build Alternative would improve traffic operations overall, which would also benefit public and private buses. Existing bike lanes would be updated at both the WB ramp and EB ramp intersections to implement Caltrans "Complete Streets" design, including bike lane buffers for right-turn movements. ADA-compliant curb ramps and protected crosswalks are proposed for all directions of the new WB ramp intersection. ADA compliant curb ramps and protected crosswalks are also proposed along three directions of the existing EB ramp intersection. The proposed updated bicycle and pedestrian facilities would also tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project, which is for a separate bike and pedestrian walkway located along the east side of Front Street. Together, congestion management, TDM, and TSM strategies

will all help the region achieve its goals of VMT and vehicle hours traveled (VHT) reduction.

Los Angeles Metro Bus Route 950X and 910, and Los Angeles Department of Transportation Commuter Express 142 operate partially on SR-47 within the project limits. There are no known plans at this time to add or modify transit facilities within the project limits, and the current Project Description does not include modification of transit facilities or operations on SR-47. However, improvements to ramp capacity and merge, diverge, and weaving areas onto the SR-47 mainline would provide transit benefits by reducing travel time and increasing trip reliability for vehicles that currently operate on the project segment of SR-47 or would in the future.

3.2.3.2 Quantitative Analysis

Table 3.2 depicts the annual CO_2 emissions and VMT within the SR-47 project area, which includes the intersections and ramps within the project limits. As shown, the existing VMT in the project area generates 2,043 metric tons (MT) per year of carbon dioxide (MT CO_2). Under the No Build Alternative—Opening Year (2023) scenario, emissions would increase to 2,225 MT CO_2. The proposed Build Alternative would generate 1,459 MT CO_2 per year in 2023—an approximately 29 percent decrease compared to existing conditions and an approximately 34 percent decrease compared to the No Build Alternative—Opening Year (2023) scenario—due to the reduced congestion from the Build Alternative.

Table 3.2: Project Corridor Modeled Annual CO_2 Emissions and Vehicle Miles Traveled, by Alternative

Alternative	CO_2 Emissions (metric tons/year)	Annual Vehicle Miles Traveled[1]
Existing/Baseline 2015	2,043	4,290,960
Open to Traffic 2023		
No Build	2,225	4,873,624
Build Alternative	1,459	5,406,200
Horizon Year 2045		
No Build	2,943	7,196,698
Build Alternative	2,069	8,304,350

Source: EMFAC (2014).
[1] Annual vehicle miles traveled (VMT) values derived from daily VMT values multiplied by 347, per CARB methodology (CARB 2008).
CARB = California Air Resources Board
CO_2 = carbon dioxide
VMT = vehicle miles traveled

In 2045, 2,943 MT CO_2 would be emitted under the No Build Alternative. This represents a further increase when compared to Existing Baseline conditions. The Build Alternative is projected to emit 2,069 MT CO_2, a decrease of approximately 30 percent compared to the 2045 No Build condition, due to reduced congestion from improved operational efficiency, but a slight increase of approximately 1 percent compared to Existing Baseline conditions since there is a possibility that some traffic currently using other routes would use the new facilities, thus resulting in increased VMT.

3.2.3.3 Limitations and Uncertainties with Modeling

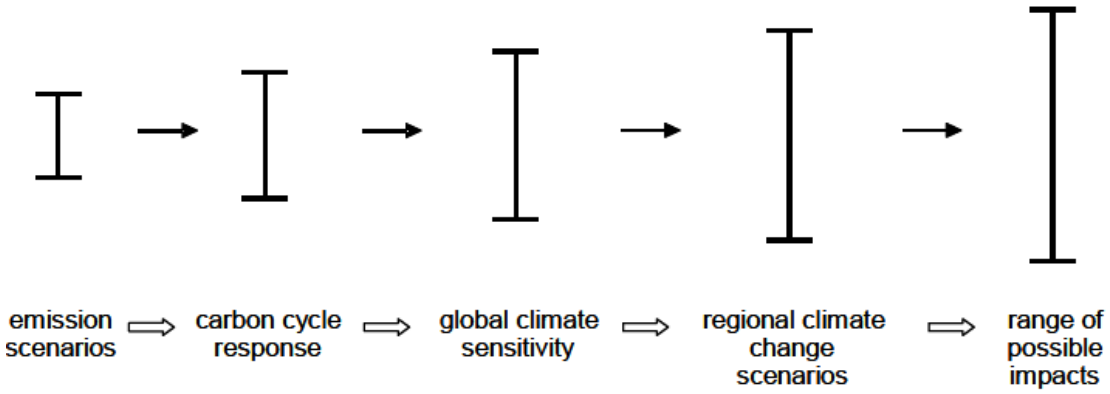
EMFAC

While EMFAC has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its emission rates are based on tailpipe emission test data. The numbers are estimates of CO_2 emissions and not necessarily the actual CO_2 emissions. The model does not account for factors such as the rate of acceleration and the vehicles' aerodynamics, which would influence CO_2 emissions. To account for CO_2 emissions, ARB's GHG Inventory follows the IPCC guideline by assuming complete fuel combustion, while still using EMFAC data to calculate CH_4 and N_2O emissions. Though EMFAC is currently the best available tool for use in calculating GHG emissions, it is important to note that the CO_2 numbers provided are only useful for a comparison of alternatives.

3.2.3.4 Limitations and Uncertainties with Impact Assessment

Figure 3-3 illustrates how the range of uncertainties in assessing greenhouse gas impacts grows with each step of the analysis, as noted in the *National Highway Traffic Safety Administration Final EIS for MY2017–2025 CAFE Standards* (NHTSA 2012):

> "Moss and Schneider (2000) characterize the 'cascade of uncertainty' in climate change simulations [Figure 3-3]. As indicated in Figure 3-3, the emission estimates … have narrower bands of uncertainty than the global climate effects, which are less uncertain than regional climate change effects. The effects on climate are, in turn, less uncertain than the impacts of climate change on affected resources (such as terrestrial and coastal ecosystems, human health, and other resources …). Although the uncertainty bands broaden with each successive step in



Source: *National Highway Traffic Safety Administration Final EIS for MY2017-2025 CAFE Standards* (July 2012). Page 5-22.

Figure 3-3 Cascade of Uncertainty in Climate Change Simulations

the analytic chain, all values within the bands are not equally likely; the mid-range values have the highest likelihood."[1]

Much of the uncertainty in assessing an individual project's impact on climate change surrounds the global nature of the climate change. Even assuming that the target of meeting the 1990 levels of emissions is met, there is no regulatory or other framework in place that would allow for a ready assessment of what any modeled increase in CO_2 emissions would mean for climate change given the overall California GHG emissions inventory of approximately 430 million tons of CO_2 equivalent. This uncertainty only increases when viewed globally. The IPCC has created multiple scenarios to project potential future global greenhouse gas emissions as well as to evaluate potential changes in global temperature, other climate changes, and their effect on human and natural systems. These scenarios vary in terms of the type of economic development, the amount of overall growth, and the steps taken to reduce greenhouse gas emissions. Non-mitigation IPCC scenarios project an increase

[1] National Highway Traffic Safety Administration. 2012. *Final Environmental Impact Statement Corporate Average Fuel Economy Standards Passenger Cars and Light Trucks Model Years 2017–2025*. Page 5-21. Website: http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/FINAL_EIS.pdf.

in global greenhouse gas emissions by 9.7 up to 36.7 billion metric tons CO_2 from 2000 to 2030, which represents an increase of between 25 and 90%.[1]

The assessment is further complicated by the fact that changes in GHG emissions can be difficult to attribute to a particular project because the projects often cause shifts in the locale for some type of GHG emissions, rather than causing "new" GHG emissions. It is difficult to assess the extent to which any project-level increase in CO_2 emissions represents a net global increase, reduction, or no change; there are no models approved by regulatory agencies that operate at the global or even statewide scale.

3.2.3.5 Construction Emissions

Construction GHG emissions would result from materials processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Based on the Roadway Construction Emissions Model (RCEM; Version 8.1.0) developed by the Sacramento Metropolitan Air Quality Management District, GHG emissions associated with construction of the proposed project would be 1,660 tons (1,506 MT) of CO_2e (CO_2 and CH_4 emissions). With an expected construction duration of approximately two years, annual emissions during construction would be 753 MT tons per year.

Measures and project features to reduce construction GHG emissions are included as part of the proposed project and can be found in Section 2.13, Air Quality. Project Feature PF-AQ-2 will ensure construction equipment vehicles equipment engines are maintained in good condition and in proper tune per manufacturer specifications, to

[1] Intergovernmental Panel on Climate Change (IPCC). February 2007. *Climate Change 2007: The Physical Science Basis: Summary for Policy Makers*. https://www.ipcc.ch/publications_and_data/ar4/wg1/en/spm.html.

minimize emissions. Project Feature PF-AQ-4 states that the contractor shall adhere to Caltrans' Standard Specifications for Construction (2015), Section 14-9.02 (Air Pollution Control); this specification requires the proposed project to comply with all federal, State, and/or local rules and regulations related to air quality, many of which also help reduce GHG emissions. Project Feature PF-T-1 (Section 2.5.3) specifies that a final TMP will be prepared prior to construction that identifies methods to avoid and minimize construction-related traffic and circulation effects, to reduce GHG emissions that could result from long detours and idling traffic.

3.2.4 CEQA Conclusion

As discussed above, the No Build Alternative shows an increase in GHGs in 2023 and 2045 compared to existing conditions. The Build Alternative shows a decrease in GHGs in 2023 compared to existing conditions due to improvements in operational efficiency and a slight increase in 2045 compared to existing conditions since there is a possibility that some traffic currently using other routes would use the new facilities, thus resulting in increased VMT. Additionally, the Build Alternative shows a decrease in GHG emissions in 2023 and 2045 compared to the No Build Alternative. Nonetheless, there are also limitations with EMFAC and with assessing what a given CO_2 emissions increase resulting from an individual project means for global climate change. Therefore, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a determination regarding the significance of the proposed project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the proposed project. These measures are outlined in the following section.

3.2.4.1 Greenhouse Gas Reduction Strategies

Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars include: (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing the portion of the State's electricity derived from renewable sources by 33 to 50 percent; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm

and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the State's climate adaptation strategy, *Safeguarding California*.

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the State build on its past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction in VMT. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030 (see Figure 3-3).



Figure 3-3: The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as CARB works to implement EOs S-3-05 and S-01-07 and to help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim

target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in pricing, transportation alternatives, mode shift, and operational efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, transportation enhancement funds, and transit planning grants. A more extensive description of these programs can be found in Caltrans' *Activities to Address Climate Change* (2013).

Caltrans Director's Policy 30 (DP-30), Climate Change (June 22, 2012), is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans *Activities to Address Climate Change* (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

3.2.4.2 Project-Level GHG Reduction Strategies

The following project features and measures will also be implemented in the proposed project to reduce GHG emissions and potential climate change impacts from the proposed project.

Project Feature PF-AQ-2 will ensure construction equipment vehicle engines are maintained in good condition and in proper tune per manufacturer specifications and to the satisfaction of the Resident Engineer. This may include conducting periodic inspections of construction equipment. Proper maintenance can minimize construction vehicle emissions, including GHG emissions.

Project Feature PF-AQ-4 states that the contractor shall adhere to Caltrans' Standard Specifications for Construction (2015), Section 14-9.02 (Air Pollution Control). This specification requires contractors to comply with all federal, State, and local rules, regulations, and ordinances related to air pollution control, many of which, such as idling restrictions, help reduce GHG emissions. The construction contractor must comply with SCAQMD rules, ordinances, and regulations with regard to air quality restrictions.

Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. The proposed project would include plantings on new and disturbed slopes to match existing conditions. These plantings would include a variety of different-sized plant material and scattered young trees where appropriate. These trees would help offset potential CO_2 emissions increases.

A final TMP will be prepared prior to construction that identifies methods to avoid and minimize construction-related traffic and circulation effects, to reduce GHG emissions associated with long detours and idling traffic. TMP measures will also minimize impacts to pedestrian and bicycle access during project construction.

SCAG RTP/SCS GHG Project-Level GHG Reduction Strategies

The following are applicable SCAG RTP/SCS GHG Project-Level GHG Reduction Strategies that are included as project features.

- Revegetate disturbed land (Refer to PF-GEO-2 and PF-VIS-2). Disturbed lands will be revegetated using native or drought tolerant plants which reduce the need for irrigation, saving energy and water.
- PF-VIS-1 would reduce damage to existing vegetation, especially to mature trees which provide cooling shade and absorb CO2.
- Ensure that all construction equipment is properly tuned and maintained (Refer to PF-AQ-2). Well-maintained equipment will maximize efficiency.
- Restricting engine idling (as seen in PF-AQ-5) reduces vehicle emissions. In the event that closures cause long traffic delays, signage or flaggers will be provided advising motorists to turn off their engines while waiting.
- Develop a traffic plan to minimize traffic flow interference from construction activities (refer to PF-T-1).

3.2.4.3 Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force

progress report on October 28, 2011,[1] outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision makers manage climate risks.

The United States Department of Transportation issued USDOT *Policy Statement on Climate Adaptation* in June 2011, committing to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions."[2]

To further the USDOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).[3] This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation's transportation systems.

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1 Obama White House. 2017. Council on Environmental Quality Climate Change Resilience. Website: https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience.

2 FHWA. Sustainability (Guidance withdrawn on May 19, 2017). Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm.

3 FHWA. 2014. FHWA Order 5520. Website: https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, State, and local levels.[1]

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of State agencies to address California's vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all State agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences, Engineering, and Medicine to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)[2] was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to State infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems, as well as a discussion of future research needs regarding SLR.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, State, federal, and public and private

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1 FHWA. 2017. Sustainability Resilience (updated October 19, 2017). Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/.

2 National Academy of Sciences, Engineering, and Medicine. 2012. *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*. Website: http://www.nap.edu/catalog.php? Record _id=13389.

entities, developed *The California Climate Adaptation Strategy* (December 2009),[1] which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across State agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring State agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how State agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR."[2]

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working toward identifying these risks throughout the State and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

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1 State of California. Climate Change – California Climate Adaptation Strategy. 2011–2017. Website: http://www.climatechange.ca.gov/adaptation/strategy/index.html.

2 State of California. 2017. Ocean Protection Council. *Sea-Level Rise Guidance Document*. Website: http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/.

The proposed project is located within the coastal zone and therefore requires a Coastal Development Permit. Figure 3-4 was created from the National Oceanic and Atmospheric Administration's (NOAA) Sea-Level Rise (SLR) viewer (https://coast.noaa.gov/digitalcoast/tools/slr) to determine if the project area would be subject to any potential SLR impacts. The following scenarios have been chosen for consideration of SLR impacts related to the proposed project: 2.2 ft (with a 5 percent probability of SLR meeting or exceeding), 4.3 ft (with a 0.5 percent probability of SLR meeting or exceeding), and the extreme H++ scenario (for visualizations purposes only, as it is not tied to any emissions scenario) of 6.4 ft. With consideration of the latest science and recommendations, the proposed project is not in an area expected to be inundated by SLR.

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2 Foot Sea-Level Rise Scenario



4 Foot Sea-Level Rise Scenario



7 Foot Sea-Level Rise Scenario

LEGEND

Project Vicinity

Low Lying Areas

Water Depth

N

0 1000 2000

FEET

SOURCE: NOAA Sea Level Rise Viewer, 2019

FIGURE 3-4

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project

Sea Level Rise
2, 4, and 7 Foot Sea-Level Rise Scenarios

07-LA-47 PM 0.3/0.8
EA No. 07-31850

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Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency consultation and public participation for the proposed project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, interagency coordination meetings, and consultation with interested parties. This chapter summarizes the results of the California Department of Transportation's (Caltrans) efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Interagency Coordination and Consultation

The formulation of project alternatives and project features has been carried out through a cooperative dialogue among representatives of the following agencies or organizations:

- City of Los Angeles Harbor Department (LAHD)
- Caltrans
- Native American representatives
- Historical groups
- State Historic Preservation Officer (SHPO)
- Southern California Association of Governments (SCAG) Transportation Conformity Working Group (TCWG)

The following sections summarize the results of the efforts of both Caltrans and LAHD to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1.1 Native American Consultation

Consultation with a number of Native American Tribes (groups and individuals) was conducted in December 2017 in compliance with Section 106 of the National Historic Preservation Act and Assembly Bill (AB) 52. The consultation with the Native American Heritage Commission (NAHC) and Native American representatives is summarized in Table 4.1.

4.1.1.1 State Historic Preservation Officer

As assigned by the Federal Highway Administration (FHWA), Caltrans has determined the historic properties evaluated as a result of the project that are not eligible for inclusion in the National Register of Historic Places within the project Area of Potential Effects (APE). Under the Section 106 Programmatic Agreement (PA) Stipulation VIII.C, Caltrans requested SHPO's concurrence on this eligibility determination on August 20, 2018. SHPO concurrence was received on September 20, 2018.

4.1.2 Transportation Conformity Working Group

On February 6, 2018, the SCAG TCWG determined that the proposed project is not a project of air quality concern (POAQC). Membership of the TCWG includes federal (United States Environmental Protection Agency [USEPA], Federal Highway Administration [FHWA], and Federal Transit Administration [FTA]), State (California Air Resources Board [CARB] and Caltrans), regional (air quality management districts and SCAG), and subregional (county transportation commissions) agencies and other stakeholders. Per the transportation conformity rules and regulations, all nonexempt projects must go through review by the TCWG.
The proposed project was approved and concurred upon by Interagency Consultation at the TCWG meeting as a project not having adverse impacts on air quality.
The proposed project meets the requirements of the Clean Air Act (CAA) and Code of Federal Regulations (CFR) Title 40, Part 93.116.

A copy of the TCWG determination is included at the end of this chapter.

4.1.3 United States Fish and Wildlife Service

Official species lists were obtained from the United States Fish and Wildlife Service (USFWS) on March 26, 2018. The species lists provide information about the threatened, endangered, and proposed species; designated critical habitat; and candidate species that may occur in the vicinity of a proposed project. The species lists provided by the USFWS are included at the end of this chapter.

Table 4.1: Summary of Native American Consultation

Groups/Individuals Contacted	Date of Project Notification Letter	Date of Tribal Response to Letter	Date and Results of Follow-up Telephone Calls and/or Emails
Barbareño/Ventureño Band of Mission Indians Julie Lynn Tumamait-Stenslie, Chair *Chumash*	December 26, 2017	No response received.	January 22, 2018: A follow-up email was sent to Ms. Tumamait-Stenslie. January 24, 2018: An additional follow-email was sent to Ms. Tumamait-Stenslie. No response has been received.
Barbareño/Ventureño Band of Mission Indians Patrick Tumamait *Chumash*	December 26, 2017	No response received.	January 18, 2018: Mr. Tumamait answered the follow-up telephone call and commented that he had no concerns about the proposed project since it is in Los Angeles County. He said to contact him regarding the proposed project only if recommended by Andrew Salas. No further comments have been received.
Barbareño/Ventureño Band of Mission Indians Eleanor Arrellanes *Chumash*	December 26, 2017	No response received.	January 22, 2018: A follow-up telephone call was made to Ms. Arrellanes. The call went to voicemail; a message was left. January 24, 2018: An additional follow-up telephone call was made to Ms. Arrellanes. The call went to voicemail; a second message was left. No response has been received.
Barbareño/Ventureño Band of Mission Indians Raudel Joe Banuelos, Jr. *Chumash*	December 26, 2017	No response received.	January 18, 2018: A follow-up telephone call was made to Mr. Banuelos. The call went directly to voicemail; a message was left. January 22, 2018: An additional follow-up telephone call was made to Mr. Banuelos. The call went to voicemail; a second message was left. No response has been received.
Fernandeño Tataviam Band of Mission Indians Rudy Ortega, Jr., Tribal President *Fernandeño Tataviam*	December 26, 2017	No response received.	January 18, 2018: A follow-up email was sent to Mr. Ortega. January 22, 2018: An additional follow-up email was sent to Mr. Ortega. No response has been received.
Gabrieleno Band of Mission Indians – Kizh Nation Andrew Salas, Chairperson *Gabrielino*	December 26, 2017	No response received.	January 22, 2018: A follow-up email was sent to Mr. Salas. January 22, 2018: Mr. Salas responded via email and asked when would be a good time to talk. January 26, 2018: After various emails back and forth over a few days attempting to set up a telephone call, LSA reached Mr. Salas on the

Table 4.1: Summary of Native American Consultation

Groups/Individuals Contacted	Date of Project Notification Letter	Date of Tribal Response to Letter	Date and Results of Follow-up Telephone Calls and/or Emails
			telephone. Mr. Salas voiced concerns about the proposed project being in a known village area previously occupied by his people and said that he is happy to share the information he has regarding the village sites with Caltrans, if requested. He requested that there be a Native American monitor from his group on site during ground-disturbing work. LSA informed him that his concerns and requests would be forwarded to Caltrans and followed up the conversation with an email. On July 11, 2018 an email was sent to Mr. Salas by Caltrans wishing to consult over concerns of village sites within the project APE. In addition, an attachment was included showing the project APE on the Kirkman-Harriman Map Los Angeles County (1860) 1938. A response email was sent to Caltrans stating that not only does the project lie within their sacred village sites, but within a sacred ceremonial place and a sacred cultural landscape/trading route. A second email stated that it would be better to make arrangements and discuss concerns and sensitivity of the project location. Caltrans responded by email on July 31, 2018, asking to coordinate a meeting/conference call with the Kizh Nation, LSA and Caltrans and asked to respond by the end of the week with available dates/times. Caltrans sent an email on August 8, 2018 asking to coordinate a meeting/conference call with the Kizh Nation, LSA and Caltrans and asked to respond by the end of the week with available dates/times. A response email was sent to Caltrans and LSA on August 8, 2018 stating that Mr. Salas will be available for a phone consultation on September 5, 2018 at 11am. Response emails from LSA and Caltrans were sent on August 9, 2018 confirming the consultation meeting date and time. A follow-up meeting was conducted on October 26, 2018. On December 5, 2018, Caltrans sent a letter to Mr. Salas to follow up on the previously mentioned concerns and to summarize Caltrans' findings from its review of the documentation provided by Mr. Salas. Caltrans reiterated that although the conditions for archaeological and Native American monitoring have not been met and monitoring is not recommended, Caltrans would like the Kizh Nation to participate in a cultural sensitivity training to be presented to construction personnel prior to construction. In addition, Caltrans would like to invite the Kizh Nation to participate in scheduled site visits. A copy of this letter is included later in this chapter.

Table 4.1: Summary of Native American Consultation

Groups/Individuals Contacted	Date of Project Notification Letter	Date of Tribal Response to Letter	Date and Results of Follow-up Telephone Calls and/or Emails
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson *Gabrielino-Tongva*	December 26, 2017	No response received.	January 18, 2018: A follow-up email was sent to Mr. Morales. January 22, 2018: An additional follow-up email was sent to Mr. Morales. No response has been received.
Gabrielino/Tongva Nation Sandonne Goad, Chairperson *Gabrielino-Tongva*	December 26, 2017	No response received.	January 18, 2018: A follow-up email was sent to Ms. Goad. January 22, 2018: An additional follow-up email was sent to Ms. Goad. No response has been received.
Gabrielino-Tongva Tribe Linda Candelaria *Gabrielino*	December 26, 2017	No response received.	January 19, 2018: A follow-up email was sent to Ms. Candelaria. January 23, 2018: An additional follow-up email was sent to Ms. Candelaria. No response has been received.
Gabrielino-Tongva Tribe Charles Alvarez, Chairperson *Gabrielino*	December 26, 2017	No response received.	January 19, 2018: A follow-up email was sent to Mr. Alvarez. January 23, 2018: An additional follow-up email was sent to Mr. Alvarez. No response has been received.
Kern Valley Indian Community Robert Robinson, Chairperson *Tubatulabal Kawaiisu*	December 26, 2017	No response received.	January 19, 2018: A follow-up email was sent to Mr. Robinson. January 23, 2018: An additional follow-up email was sent to Mr. Robinson. No response has been received.
Kitanemuk & Yowlumne Tejon Indians Delia Dominguez, Chairperson *Yowlumne Kitanemuk*	December 26, 2017	No response received.	January 19, 2018: A follow-up email was sent to Ms. Dominguez; the email was returned as undeliverable due to a full email inbox on the recipient's end. January 22, 2018: A telephone call was made to Ms. Dominguez. The call went to voicemail; a message was left. January 22, 2018: Ms. Dominguez returned the telephone call and stated that she has no comments on the proposed project due to her group's location in the Bakersfield area. No further comments have been received.

Table 4.1: Summary of Native American Consultation

Groups/Individuals Contacted	Date of Project Notification Letter	Date of Tribal Response to Letter	Date and Results of Follow-up Telephone Calls and/or Emails
San Fernando Band of Mission Indians John Valenzuela, Chairperson *Fernandeño Tataviam Serrano Vanyume Kitanemuk*	December 26, 2017	No response received.	January 22, 2018: A follow-up telephone call was made to Mr. Valenzuela. The call went to voicemail; the mailbox was full and LSA was unable to leave a message. January 24, 2018: An additional follow-up telephone call was made to Mr. Valenzuela; again, the voice mailbox was full.
San Manuel Band of Mission Indians Lee Clauss, Director—Cultural Resources Management Department *Serrano*	December 26, 2017	No response received.	Please see entry for Lynn Valbuena, below. A response for the San Manuel Band of Mission Indians was received from a representative in the Cultural Resources Management Department on January 19, 2018.
San Manuel Band of Mission Indians Lynn Valbuena *Serrano*	December 26, 2017	No response received.	January 18, 2018: A follow-up telephone call to the telephone number listed was directed to a receptionist, who forwarded the telephone to the Cultural Resources Management Department. Voicemail for Jessica Mauck was reached; a message was left for her. January 19, 2018: Ms. Mauck responded to LSA via email, stating that the proposed project is outside of Serrano territory and, as such, the San Manuel Band of Mission Indians does not have any comments on the proposed project. No further comments have been received.
Santa Ynez Band of Chumash Indians Kenneth Kahn, Chairperson *Chumash*	December 26, 2017	No response received.	January 22, 2018: A follow-up email was sent to Mr. Kahn. January 24, 2018: An additional follow-up email was sent to Mr. Kahn. No response has been received.
Soboba Band of Luiseño Indians Joseph Ontiveros, Cultural Resources Department *Luiseño Cahuilla*	December 26, 2017	No response received.	January 22, 2018: A follow-up email was sent to Mr. Ontiveros. January 24, 2018: An additional follow-up email was sent to Mr. Ontiveros. No response has been received.

Source: *Historic Property Survey Report* (2018).
Caltrans = California Department of Transportation

4.1.4 Section 4(f) Consultation

As described in more detail in Section 2.1, construction of the Build Alternative would not result in temporary or permanent effects to recreation resources protected under Section 4(f). The Build Alternative would result in the acquisition of Knoll Hill Dog Park which is owned by LAHD. However, due to the absence of documentation identifying Knoll Hill Dog Park among the City of Los Angeles' (City) resources and the property's lack of an official recreational use designation, it was determined that Knoll Hill Dog Park is not a significant public recreational resource and therefore is not a Section 4(f) resource. Included at the end of this chapter is a letter from Caltrans to LAHD on June 12, 2018 requesting concurrence that Knoll Hill Dog Park is not a Section 4(f) resource. A concurrence letter from LAHD was received on July 25, 2018.

4.2 Community Outreach and Public Involvement

4.2.1 Project Development Team

The City of Los Angeles participates in the regular PDT meetings conducted by POLA and Caltrans for the proposed project. Additionally, technical experts from Caltrans including staff from Design, Right-of-Way, Traffic, and Hazardous Waste attend the PDT meetings. The PDT meetings cover a wide range of topics related to the proposed project, including development and evaluation of alternatives, engineering considerations, Context Sensitive Solutions, environmental issues, and the environmental document and documentation process. Context sensitive solutions have been considered and will continue to be considered as the proposed project moves into the design phase of the project. As stated in Section 2.6, Visual/Aesthetics, the use of aesthetic treatments consisting of color, textures, and/or artistic designs compatible with existing walls/structures will be considered for new soundwalls and retaining walls. If the only option is to match existing structures in-kind, new noise barriers will be supplemented with self-attaching vines to soften their appearance and applied with anti-graffiti coating (if allowable) to discourage graffiti. The composition of the structure and associated facilities will promote a uniform appearance with the existing structure and roadway. On December 5, 2018, after considering the evaluation conducted as part of this document and public comments received during the public review period, the PDT recommended the Build Alternative as the Preferred Alternative.

Additionally, POLA has conducted meetings with local entities to present information about the project and schedule. To date, the following meetings have been held:

- June 22, 2018 – Council District 15
- August 13, 2018 – Northwest San Pedro Neighborhood Council
- August 14, 2018 – San Pedro Chamber Economic Policy Committee
- August 20, 2018 – Coastal San Pedro Neighborhood

4.2.2 Port of Los Angeles Project Website

LAHD maintains a webpage (available at https://www.portoflosangeles.org/transportation/pola_projects.asp) that provides information to the public regarding the proposed project, as well as the status of the environmental document and the environmental documentation process for the proposed project. Caltrans also maintains a website that provides similar information (available at http://www.dot.ca.gov/d7/projects).

4.2.3 Noise Barrier Surveys

Noise barrier surveys were sent to the benefited receptors for the feasible and reasonable noise barriers identified in the *Noise Study Report* (NSR; April 2018) and *Noise Abatement Decision Report* (NADR; December 2018) prepared for the proposed project. Based on the *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (May 2011), for abatement located within public right-of-way, if more than 50 percent of the votes from responding benefited receptors oppose the abatement, the abatement will not be considered reasonable. Votes from property owners and non-owner-occupants of benefited receptors were surveyed. For owner-occupied dwelling units, the property owner gets one vote. For non-owner-occupied dwelling units, the renter gets 10 percent of one vote and the owner get 90 percent of one vote.

For noise abatement to occur on private property, 100 percent of owners of property upon which the abatement is to be placed must support the proposed abatement. In the case of proposed noise abatement on private property, no response from a property owner, after a reasonable number of attempts, is considered a "no" vote.

Noise Barrier No. 2 is located solely on private property and Noise Barrier No. 367 is located on both private property and public right-of-way.

On October 1, 2018, a noise barrier survey letter was delivered to the residents potentially benefitted by Noise Barrier Nos. 2 and 367. This survey requested each owner's opinion on whether or not s/he is in favor of a noise barrier. Residents were asked to respond by October 30, 2018.

Following the due date from the initial survey, the responses were tallied for each of the noise barriers. Because responses were not received from all residents, LAHD followed up in person on November 26, 27, and 28, 2018, with the nonresponding property owners. As a result of responses collected for these surveys following the in-person visits, using the voting criteria, it was determined that none of the noise barriers will be built.

The preliminary noise abatement decision presented in this report is based on preliminary project alignments and profiles, which may be subject to change during the design phase. The final decision on noise abatement would be made upon completion of the project design.

4.2.4 Public Circulation of the Draft Initial Study/Environmental Assessment

Public circulation of the Draft Initial Study/Environmental Assessment (IS/EA) began on October 1, 2018, for a 30-day review period.

As outlined in the FHWA Guidance for Preparing and Processing Environmental and Section 4(f) Documents, Technical Advisory T 6640.8A, Section H, following the public availability period, the EA should be revised or an attachment provided, as appropriate, to: (1) reflect changes in the proposed action or mitigation measures resulting from comments received on the EA or at the public hearing (if one is held) and any impacts of the changes; (2) include any necessary findings, agreements, or determination (e.g., wetlands, Section 106, Section 4(f)) required for the proposal; and (3) include a copy of pertinent comments received on the EA and appropriate responses to the comments.

As required by California Environmental Quality Act (CEQA) Guidelines, Section 15072, a Notice of Availability (NOA) to adopt an ND and availability of the IS (and Notice of Public Hearing) was filed with the Los Angeles County Clerk and the State Clearinghouse on October 1, 2018 (please see the public notice at the end of this chapter). Additionally, as required by the CEQA Guidelines, Section 15087, a public NOA of the Draft IS/EA for the project was published as a display ad in the *Los Angeles Times* (October 1, 2018)*, Press Telegram* (October 1, 2018), *Random Lengths News* (October 4, 2018), *Torrance Daily Breeze* (October 1, 2018), *Hoy* (October 5, 2018)*,* and *Metropolitan News* (October 1, 2018). Printed and electronic copies of the Draft IS/EA were made available for public review at the following locations:

Caltrans District 7
100 South Main Street
Los Angeles, California 90012

San Pedro Regional Library (electronic copy only)
931 South Gaffey Street
San Pedro, California 90731

The document was also available online at: http://www.dot.ca.gov/d7/env-docs/.

A public hearing was held from 6:00 p.m. to 8:00 p.m. at the Port of Los Angeles Administration Building located at 425 South Palos Verdes Street, San Pedro, California 90731, and was attended by six members of the public. One comment was recorded by the court reporter, and another comment was submitted via a comment card. Issues raised by the public included increases in noise level/sound barriers and relocation of the dog park. Representatives from Caltrans, LAHD, and the project consultant team also attended the hearing.

Table 4.2 provides an index list of the agencies and persons that commented on the Draft IS/EA prior to the close of the public comment period or immediately thereafter. Each comment letter received is indexed with the number below.

Table 4.2 Comment Letters Received During Public Comment Period

Letter	Name	Date
F-1	United States Environmental Protection Agency	October 30, 2018
S-1	California Coastal Commission	November 21, 2018
C-1	Sharon Marshall	October 17, 2018
T-1	Peter Schroff	October 17, 2018

Please refer to Appendix I for the responses to public comments. Individual issues within each comment letter are numbered along the right-hand margin of each letter. The responses to each comment letter immediately follow each letter and are referenced by the index numbers in the margin.

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Lisa Ann L. Mangat, *Director*
Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

September 20, 2018

VIA EMAIL

In reply refer to: FHWA_2018_0820_002

Ms. Kelly Ewing-Toledo
Senior Environmental Planner
Environmental Branch Chief, Cultural Resources Unit
Caltrans, District 7
100 S Main Street, MS 16A
Los Angeles, CA 90012

Subject: Determination of Eligibility for the Proposed SR-47/Vincent Thomas Bridge and Harbor Boulevard/Front Street Interchange Reconfiguration Project, City and County of Los Angeles, CA

Dear Ms. Ewing-Toledo:

Caltrans is initiating consultation for the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA). As part of your documentation, Caltrans submitted a Historic Property Survey Report (HPSR), Historical Resource Evaluation Report (HRER), and an Archaeological Survey Report (ASR) for the project.

The Port of Los Angeles, in cooperation with the City of Los Angeles and Caltrans, is proposing to reconfigure the SR-47/Vincent Thomas Bridge and Harbor Boulevard/Front Street Interchange (Interchange). The purpose of the project is to improve safety, access and the efficient operation of the Interchange and improve goods movement and traffic circulation in the area in a manner that is sensitive to the community. Proposed improvements include eliminating a problematic weave at the shared off-ramp terminus by creating a separate terminus for the westbound ramps; modification of the eastbound ramps; and modification of Harbor Boulevard and Front Street between the new and existing termini. Maximum depth of disturbance is 50 feet. For a more detailed description of the project and area of potential effect, please refer to page 1 of the HPSR and pages 1-2 of the HRER.

In accordance with Stipulation VIII.C.6 of the PA, Caltrans is requesting concurrence that a segment of the Pacific Electric Railway San Pedro via Torrance Line (P19-188896) is not eligible for the National Register of Historic Places (NRHP) because it was moved and does not have integrity to the period of significance for the project.

Based on my review of the submitted documentation, I concur.

If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov or Alicia Perez at (916) 445-7020 with e-mail at alicia.perez@parks.ca.gov .

Sincerely,

Julianne Polanco
State Historic Preservation Officer

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 6, 2018
Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF THE MEETING OF THE TRANSPORTATION CONFORMITY WORKING GROUP. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Meeting of the Transportation Conformity Working Group was held at the SCAG office in Los Angeles.

In Attendance:

Huddleston, Lori	Metro
Morris, Michael	FHWA
Morrissey, doreen	Metro
Sherwood, Arnold	UCB
Walecka, Carla	TCA

SCAG:

Barajas, Agustin
Chin, Stephanie
Luo, Rongsheng
Tran, Daniel

Via Teleconference:

Adam, Stevenson	FTA
Brugger, Ronald	LSA
Cacatian, Ben	VCAPCD
Christian, Shalanda	Caltrans Headquarters
Gutierrez, Pablo	SCAG
Hudson, Kerrie	Caltrans District 8
Kulkarni, Anup	OCTA
Liptak, Zach	Dokken Engineering
Masters, Martha	RCTC
Tavitas, Rodney	Caltrans Headquarters
Tax, Wienke	EPA, Region 9
Tisopulos, Tara	OCTA
Vaughn, Joseph	FHWA
Yoon, Andrew	Caltrans District 7

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 6, 2018
Minutes

1.0 CALL TO ORDER AND SELF-INTRODUCTION

Lori Huddleston, TCWG Chair, called the meeting to order at 10:05 am.

2.0 PUBLIC COMMENT PERIOD

None.

3.0 CONSENT CALENDAR

3.1. December 6, 2017 TCWG Meeting Minutes
The meeting minutes were approved.

4.0 INFORMATION ITEMS

4.1 Review of PM Hot Spot Interagency Review Forms

1) **S1160271**
It was determined that this is not a POAQC (EPA concurrence received via email after the meeting; Revised PM hot spot interagency review form with corrected traffic data in the table and FTIP project ID received after the meeting).

2) **ORA131303**
It was determined that this is not a POAQC (EPA concurrence received via email after the meeting).

3) **RIV111003**
It was determined that this is not a POAQC (EPA concurrence received via email after the meeting).

4.2 Clarifications on Exempt Project Determination
Rodney Tavitas, Caltrans Headquarters, reported that Caltrans had finalized exemption guidance on road diets, auxiliary lanes, and ramp metering projects in consultation with EPA and FHWA staff, and the Guidance has benefited the whole US. Mr. Tavitas acknowledged Andrew Yoon, Caltrans District 7, and Lori Huddleston, Metro, for their significant contributions and thanked EPA Region 9 and FHWA California Division staff for their collaboration. In addition, Mr. Tavitas requested local agencies to provide a one-month list of the projects that have used the exemption for estimating cost savings from the exemption in California.

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 6, 2018
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4.3 Proposed OCTA TCM Substitution

Anup Kulkarni, OCTA, reported the following:

- OCTA was proposing to substitute SR-241/91 Express Lane Connectors TCM project due to recent project schedule update with three traffic signal synchronization projects along three major corridors in Orange County.
- OCTA staff had been coordinating with SCAG and TCA staff in TCM substitution process.
- Proposed TCM substitution met all federal requirements including:
  - ✓ Three traffic signal synchronization projects are located in the same Orange County portion of South Coast Air Basin
  - ✓ OCTA has legal authority and full funding to implement traffic signal synchronization projects
  - ✓ Three traffic signal synchronization projects will be operational by same original completion date of SR-241/91 Express Lane Connectors project
  - ✓ TCM substitution was modeled using Orange County Transportation Analysis Model (OCTAM4.0) which is consistent with SCAG's Regional Travel Demand Model.
  - ✓ Emissions were estimated using ARB's EMFAC2014 Model for summer ROG and NOx emissions, winter NO_2 and CO emissions, and annual ROG, NOx, PM_{10}, and $PM_{2.5}$ emissions results for 2021, 2031, and 2040.
  - ✓ Emissions results demonstrate that traffic signal synchronization projects yield equivalent or greater emission reductions benefit.

In response to a question, Rongsheng Luo, SCAG, stated that next steps of TCM substitution are:

- ✓ SCAG review of OCTA's proposed TCM substitution
- ✓ SCAG will prepare a draft TCM substitution report for a 30-day public review
- ✓ Draft TCM substitution will be presented to SCAG's Energy and Environment Committee (EEC) for recommendation to SCAG's Regional Council for adoption
- ✓ Upon Regional Council adoption, TCM substitution will be submitted to EPA and ARB for their respective concurrence
- ✓ Upon EPA and ARB concurrence, committed TCM status of SR-241/91 Express Lane Connectors project will be rescinded and three traffic signal synchronization projects will become new committed TCM
- ✓ TCM substitution will be effectuated through an FTIP amendment

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 6, 2018
Minutes

4.4 FTIP Update

Agustin Barajas, SCAG, reported the following on behalf of John Asuncion, SCAG:

- Maria Lopez retired as SCAG FTIP Department Manager effective January 31, 2018 and Pablo Lopez is Activing FTIP Department Manager
- SCAG staff had received 2019 FTIP projects submittals from all counties and was undertaking review and analysis
- 2017 FTIP Administrative Amendment #17-16 was under state and federal review for approval. All previous 2017 FTIP Amendments had received full approval.
- County projects submittals for 2017 FTIP Administrative Modification #17-17 and 2017 FTIP Emergency Amendment #17-18 were due to SCAG on February 6, 2018.

4.5 RTP Update

Daniel Tran, SCAG, reported the following:

- SCAG staff was reviewing project submittals from county transportation commissions for Amendment #3 to 2016 RTP/SCS.
- Amendment #3 follows same schedule as 2019 FTIP with SCAG's Regional Council adoption in September 2018 and federal approval in December 2018.

4.6 EPA Update

Wienke Tax, EPA Region 9, reported that EPA signed a final rule to fully approve South Coast 2006 24-hour $PM_{2.5}$ SIP on January 24, 2018; as a result, related stationary off-set and highway sanctions will be permanently terminated upon effectiveness of final rule.

4.7 ARB Update

There was no new ARB update.

4.8 Air Districts Update

There was no new air district update.

5.0 INFORMATION SHARING

None.

6.0 ADJOURNMENT

The meeting was adjourned at 10:50 am.

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 6, 2018
Minutes

The next Transportation Conformity Working Group meeting will be held on Tuesday, March 27, 2018 at the new SCAG office in downtown Los Angeles.

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Transmittal No. 2

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012
PHONE (213) 897-0703
FAX (213) 897-0685
TTY 711
www.dot.ca.gov

Serious Drought.
Making Conservation
a California Way of Life.

June 12, 2018

Guillermo Martinez
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

RE: SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Section 4(f) Evaluation Relating to Knoll Hill Dog Park

Dear Mr. Martinez:

The California Department of Transportation (Caltrans) (lead agency), in coordination with the Port of Los Angeles (Port) (funding agency) and in cooperation with the City of Los Angeles (City), is in the process of preparing a joint Initial Study/Environmental Assessment (IS/EA) for the State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration (proposed project) in Los Angeles County, California.

Effective March 30, 2017, ***Caltrans continues to assume Federal Highway Administration (FHWA) responsibilities under the National Environmental Policy Act, pursuant to the United States Code (USC) Title 23, Section 325 Memorandum of Understanding (MOU); the 23 USC 327 MOU; and other federal environmental laws, in the same manner as was assigned under the Pilot Program, with minor changes.*** The environmental review, consultation, and other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

The proposed project may receive federal funding and/or discretionary approvals through the United States Department of Transportation (i.e., FHWA); therefore, documentation of compliance with Section 4(f) is required. The purpose of this letter is to request the Port's concurrence that Knoll Hill Dog Park is not considered a Section 4(f) resource. Section 4(f) of the federal Department of Transportation Act of 1966 (49 USC 303) declares that "[i]t is the policy of the United States government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Knoll Hill Dog Park is located within the project area, but based on the research Caltrans conducted; we have concluded that the park is not a Section 4(f) resource. The following describes the steps taken to research this property and summarizes the reasons for this determination.

As defined in the FHWA Section 4(f) Policy Paper, a Section 4(f) recreational resource is described as the following:

"Publicly owned land is considered to be a park, recreation area or wildlife and waterfowl refuge when the land has been officially designated as such by a Federal, State or local agency, and the officials with jurisdiction over the land determine that its primary purpose is as a park, recreation area, or refuge."

"Section 4(f) applies when the land is one of the enumerated types of publicly owned lands and the public agency that owns the property has formally designated and determined it to be significant for park, recreation area, or wildlife and waterfowl refuge purposes. Evidence of formal designation would be the inclusion of the publicly owned land, and its function as a Section 4(f) property into a city or county Master Plan. A mere expression of interest or desire is not sufficient."

Knoll Hill Dog Park is located in the community of San Pedro within Los Angeles. The existing property is approximately 0.75 acre and is a public-use off-leash dog park. It is located just north of the SR-47 westbound on-ramp, adjacent to the inactive former Pacific Harbor Rail Line on the Port of Los Angeles property.

Several of the City's resources, including the City's websites, planning documents, zoning map, and General Plan land use map, were reviewed to identify the nature of this property. Knoll Hill Dog Park is not included on the City of Los Angeles Department of Recreation and Parks website, which includes addresses and additional information on the City's dog parks. Additionally, none of the following City plans included any reference to Knoll Hill Dog Park: San Pedro Community Plan, San Pedro Community Plan: Draft 2016, and San Pedro Specific Plan. The City's zoning map and General Plan land use map designates the property for Limited Industrial land use, which only allows recreational facilities as an accessory use incidental to the primary industrial use (see enclosure).

The absence of documentation identifying Knoll Hill Dog Park among the City's recreational resources and the property's lack of an official designation that its primary purpose is a park, recreation area, or refuge, leads to the determination that Knoll Hill Dog Park is not a park or recreation area of national, state, or local significance. For more information, please refer to the FHWA Section 4(f) Policy Paper, specifically Part II—Questions and Answers Regarding Section 4(f) Applicability and Compliance, Identification of Section 4(f) Properties, 1. Public Parks, Recreation Areas, and Wildlife and Waterfowl Refuges and 25. Planned Section 4(f) Properties.

Per FHWA and Caltrans guidelines, Caltrans requests a letter of concurrence from the Port to confirm the determination that the Port does not consider Knoll Hill Dog Park as a park or recreational area of local significance and therefore is not considered a Section 4(f) resource.

Sincerely,

Karl Price
KARL PRICE
Senior Environmental Planner
Division of Environmental Planning
Caltrans, District 7

Enclosure

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Transmittal No. 2

THE PORT OF LOS ANGELES
425 S. Palos Verdes Street Post Office Box 151 San Pedro, CA 90733-0151 TEL/TDD 310 SEA-PORT www.portoflosangeles.org

Eric Garcetti *Mayor, City of Los Angeles*

Board of Harbor Commissioners: Jaime L. Lee, *President*; David Arian, *Vice President*; Lucia Moreno-Linares, *Commissioner*; Anthony Pirozzi, Jr., *Commissioner*; Edward R. Renwick, *Commissioner*

Eugene D. Seroka *Executive Director*

July 25, 2018

Karl Price
Caltrans, District 7
100 S. Main Street, Suite 100
Los Angeles, CA 90012

Dear Mr. Price:

SUBJECT: SR-47/VINCENT THOMAS BRIDGE AND FRONT STREET/HARBOR BOULEVARD INTERCHANGE RECONFIGURATION SECTION 4(F) EVALUATION RELATING TO KNOLL HILL DOG PARK

The California Department of Transportation (Caltrans) is the lead agency preparing the joint Initial Study/Environmental Assessment (IS/EA) for the State Route (SR) 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration (proposed project). In your June 12, 2018 letter to the City of Los Angeles Harbor Department (Harbor Department), you requested Harbor Department concurrence that the Knoll Hill Dog Park is not considered a Section 4(f) resource under the Federal Department of Transportation Act of 1966.

The Harbor Department concurs that this area colloquially known as the Knoll Hill Dog Park should not be considered a Section 4(f) resource. Harbor Department staff reviewed similar City of Los Angeles resources that you used to make your determination—websites, planning documents, zoning map, General Plan land use map, and the Port of Los Angeles Master Plan—and found no official designation of the site as a recreational resource. Furthermore, when the dog park was relocated from the top of Knoll Hill to the bottom of the south side of the hill in 2007, the Harbor Department explicitly stated that this development was temporary at the time of construction. Therefore, the Knoll Hill Dog Park is not a significant public park or recreation area.

If you have any questions, please contact me at (310) 732-3850.

Sincerely,

MICHAEL KEENAN
Director of Planning and Strategy

MK:dj:kl

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

Printed on recycled paper

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From: NMFSWCRCA Specieslist - NOAA Service Account
To: Leeann McDougall
Subject: Re: California Department of Transportation (Caltrans) District 7, RE: SR-47/Vincent Thomas Bridge
Date: Wednesday, December 12, 2018 3:39:59 PM

Receipt of this message confirms that NMFS has received your email to nmfswcrca.specieslist@noaa.gov. If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page (http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To: December 12, 2018
Consultation Code: 08ECAR00-2018-SLI-0760
Event Code: 08ECAR00-2019-E-00705
Project Name: State Route 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2018-SLI-0760

Event Code: 08ECAR00-2019-E-00705

Project Name: State Route 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

Project Type: TRANSPORTATION

Project Description: The Port of Los Angeles (POLA), in cooperation with the City of Los Angeles and the California Department of Transportation (Caltrans), is proposing to reconfigure the existing interchange at State Route 47 (SR-47)/Vincent Thomas Bridge and Front Street/Harbor Boulevard. The project limits on SR-47 extend from approximately Post Mile [PM] 0.3 to PM 0.8.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.75002171053208N118.28277603703705W



Counties: Los Angeles, CA

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Pacific Pocket Mouse *Perognathus longimembris pacificus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Insects

NAME	STATUS
Palos Verdes Blue Butterfly *Glaucopsyche lygdamus palosverdesensis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8535	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8148	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

From: Leeann McDougall
To: "nmfswcrca.specieslist@noaa.gov"
Subject: California Department of Transportation (Caltrans) District 7, RE: SR-47/Vincent Thomas Bridge
Date: Wednesday, December 12, 2018 3:39:00 PM

Quad Name **San Pedro**

Quad Number **33118-F3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) - **X**
Range White Abalone (E) - **X**

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat - **X**

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) - X

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH - X

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - X
MMPA Pinnipeds - X

Quad Name **Torrance**
Quad Number **33118-G3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - X
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -

Chinook Salmon EFH -

Groundfish EFH - X

Coastal Pelagics EFH - X

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds - X

California Department of Transportation (Caltrans) District 7
100 S Main St, Los Angeles, CA 90012
(213) 897-3656

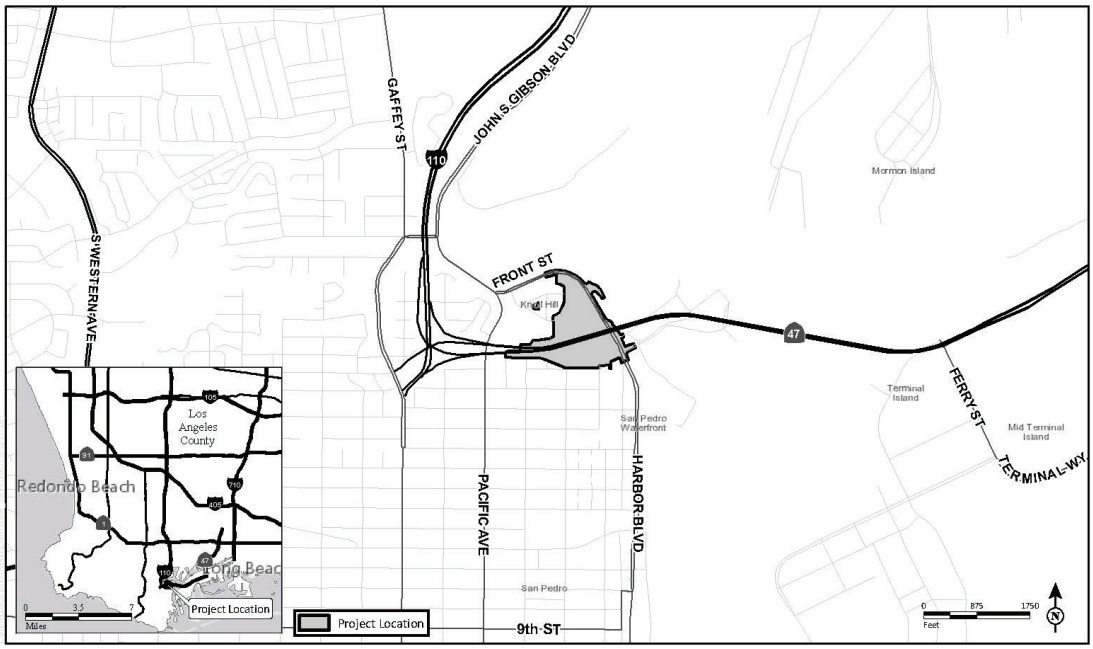
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, CA 92614

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PUBLIC NOTICE

Transmittal No. 2

Notice of Availability (NOA) of Draft Initial Study/Environmental Assessment [IS/EA]
and Notice of Public Hearing for the
State Route-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project



WHAT IS BEING PLANNED?	The California Department of Transportation (Caltrans), in cooperation with the Port of Los Angeles (POLA) and the City of Los Angeles, proposes to reconfigure the existing interchange at State Route 47 (SR-47)/Vincent Thomas Bridge and Harbor Boulevard/Front Street. The project limits on SR-47 extend from approximately Post Mile [PM] 0.3 to PM 0.8 (SR-47 from west of Harker Street to east of North Front Street) in the City of Los Angeles in Los Angeles County, California. The purpose of the proposed project is to: (1) improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange; and (2) improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community. Caltrans is the lead agency under both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). A No-Build Alternative and a Build Alternative are proposed for the project. The Build Alternative proposes to reconfigure the existing interchange at SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard. The proposed improvements would eliminate a bottleneck condition at the shared off-ramp terminus by creating a new, separate terminus for the westbound ramps.
WHY THIS NOTICE?	Caltrans has studied the effects that the proposed project may have on the environment and community. The results of these studies are contained in an environmental document known as a Draft Initial Study/Environmental Assessment (IS/EA). The purpose of this notice is to inform the public of its completion and availability to any interested individuals.
WHAT'S AVAILABLE?	The Draft Initial Study/Environmental Assessment [IS/EA] is available for viewing and download at **http://www.dot.ca.gov/d7/env-docs/**. The Draft IS/EA is also available for review at the Caltrans District 7 office (100 S. Main Street, Los Angeles, CA 90012) and the San Pedro Regional Library (931 S. Gaffey Street, San Pedro, CA 90731) during normal business hours.
WHERE YOU COME IN / CONTACTS	Have the potential impacts been addressed? Do you have information that should be included? Would you care to make any other comments on the project? Please submit your comments in writing no later than **5:00PM on October 30, 2018** to: Mr. Ron Kosinski, Deputy District Director California Department of Transportation Division of Environmental Planning 100 S. Main Street, MS-16A Los Angeles, CA 90012
WHEN AND WHERE?	A public hearing will be held to allow any interested individuals an opportunity to discuss the project with Caltrans staff. **The public hearing will be held on Wednesday, October 17, 2018 at the Port of Los Angeles Administration Building, 425 S Palos Verdes St, San Pedro, CA 90731 from 6:00PM to 8:00PM.** Individuals who require special accommodations are requested to contact Caltrans' Public Affairs Office at (213) 897-3656 at least 21 days in advance prior to the scheduled hearing date.

Thank you for your interest in this transportation project!

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

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Chapter 5 List of Preparers

The following persons were principally responsible for preparation of this Draft Initial Study/Environmental Assessment (IS/EA) and supporting technical studies.

5.1 California Department of Transportation, District 7

Price, Karl, Senior Environmental Planner. B.S Biology, California State Polytechnic University Pomona; 21 years of Environmental Planning experience. Contribution: Document review.

Speerstra, Savannah, Environmental Planner. B.S. in Environmental Science and Management, University of California, Davis; 1 year of experience in environmental planning. Contribution: Project coordination and document review.

Johnson, Jeff, Associate District Biologist, M.S. Biology, B.S. Biology, 28 Years of experience, reviewed Biology Section.

Kay, Dustin, Associate Environmental Planner (Archaeology), PQS Co-Principal Investigator-Prehistoric Archaeology, BS in Anthropology from Oregon State University, 28 years of experience in Cultural Resources, Reviewed the ASR.

Moawad, Sally, Associate Environmental Planner. M.S. in Environmental Studies with an emphasis in Policy and Planning (June, 2007) Cal State Fullerton, B.A. in Political Science with minor in Sociology (June, 2004) Cal State Fullerton, 11 years of experience, Contribution: NEPA QC Reviewer

Parmar, Arnold J., Transportation Engineer, B.S. Engineering (Civil), 18 Years of Experience in Noise & Vibration, reviewed Noise Study Report and Noise Abatement Decision Report.

Szweminska, Maria, Engineering Geologist, Professional Geologist (PG) and Certified Hydrogeologist (CHG), Master of Science in Earth Sciences (Specialty in Contaminant Hydrogeology); University of Waterloo, Waterloo, Ontario, Canada. Master of Science in Geology; (Specialty in Hydrogeology); University of Warsaw, Warsaw, Poland, 19 years of experience in the fields of environmental consulting and environmental risk management and in public sector at Caltrans Hazardous Waste Group.

Yoon, Andrew, Senior Transportation Engineer, Air Quality. B.S. Civil and Environmental Engineering, University of California Los Angeles; 22 years of experience in civil and environmental engineering for infrastructure and development projects. Contribution: Document review and Air Quality coordination.

5.2 City of Los Angeles Harbor Department

Martinez, Guillermo, P.E., Senior Transportation Engineer. B.S. in Electrical Engineering, Loyola Marymount University, Los Angeles; 17 years of experience in transportation/civil engineering. Contribution: Senior review of the IS/EA.

Aziz, Sarah, P.E. B.S. in Civil Engineering, California State Polytechnic University, Pomona; M.S. in Civil Engineering, California State Polytechnic University, Pomona; 6 years of experience in transportation/civil engineering. Contribution: Review of the IS/EA.

5.3 AECOM

Willits, Shannon, P.E., Senior Project Manager. B.S. in Civil Engineering, University of California, Irvine; 27 years of experience in transportation planning and design. Contribution: Draft Project Report.

Slawson, Brad, P.E., Senior Project Engineer. B.S. in Civil Engineering, University of California, Irvine; 19 years of experience in transportation planning and design. Contribution: Draft Project Report.

5.4 LSA

McCann, Rob, Principal. B.A. in Geography, California State University, Fullerton; 37 years of experience with the environmental assessment processing procedures for NEPA/CEQA. Contribution: Quality control review of the IS/EA and ND/FONSI.

Harris, Jayna, Associate/Senior Environmental Planner. B.A. in Geography, California State University, Fullerton; 17 years of experience in environmental planning and analysis. Contribution: Quality control and quality assurance review of the IS/EA and ND/FONSI.

Atwater, David, Senior Environmental Planner. B.S. in Urban and Regional Planning with an Interdisciplinary Minor in Geographic Information Systems Applications, California State Polytechnic University, Pomona; 12 years of experience in environmental planning and analysis. Contribution: Quality control and quality assurance review of the IS/EA.

Bean, Andrea, Assistant Environmental Planner. B.A. in Anthropology (*summa cum laude*), University of California, Santa Barbara; M.A. in Anthropology, Archaeology Emphasis, California State University, Long Beach; 2 years of experience in conducting research and preparing technical sections of environmental documents. Contribution: Preparer of various sections of the IS/EA.

Brugger, Ronald, Senior Air Quality Specialist. B.S. in Mechanical Engineering, University of Wisconsin, Madison; 10 years of computer software development followed by 25 years of environmental computer modeling, air quality dispersion modeling, greenhouse gas emissions analyses, and health risk assessments to satisfy NEPA/CEQA requirements. Contribution: Preparer of Air Quality Report and Air Quality Conformity Report.

Canterbury, Meredith, Senior GIS Specialist. B.A. in Geography with Emphasis in Environmental Analysis, California State University, Fullerton; 10 years of experience in the GIS field. Contribution: GIS graphics preparation and generation of technical data from GIS files for the technical reports and the IS/EA.

Carpenter, Jill, Senior Biologist/Bat Specialist. B.S. in Biological Sciences, with Specialization in ecology; 9 years of experience participating in a wide range of field surveys, monitoring, and environmental assessment activities. Contribution: Preparer of Daytime Bat Habitat Suitability Assessment.

Chen, Zhe, Noise Specialist. B.S. in Chemistry, Peking University; M.S. in Environmental Engineering and Science, Stanford University; 4 years of experience in climate change, air quality, and noise. Contribution: Contributor to the Noise Study Report and Noise Abatement Decision Report.

Dow, Gary, Associate/Graphic Designer. B.A. in Architectural Drafting, California State Polytechnic University, Pomona; 43 years of experience in creating graphics, computer mapping, and presentation materials for environmental

documents. Contribution: Graphics and management of graphics for the IS/EA.

Galambos, Autumn, Environmental Planner. M.A. in City Planning, San Diego State University; B.A. in Social Science with an Emphasis in Environmental Studies, San Diego State University; 3 years of experience conducting research and preparing technical sections of environmental documents. Contribution: Preparer of various sections of the IS/EA and assistant project manager.

Lui, Jason, Senior Noise Specialist. B.A. in Environmental Analysis and Design, University of California, Irvine; M.S. in Environmental Studies, California State University, Fullerton; 11 years of experience in environmental studies, specializing in noise and air quality analysis. Contribution: Preparer of Noise Study Report and Noise Abatement Decision Report.

McDougall, Leeann, Assistant Biologist. B.S. in Biological Sciences, with Specialization in conservation biology, California State University, San Jose; 5 years of experience in the wildlife biology field. Contribution: Preparer of Natural Environment Study (Minimal Impact).

Morrow, Allison, Senior Environmental Planner. M.B.A., California State University, Long Beach; 9 years of experience in preparing CEQA/NEPA technical studies and environmental documents. Contribution: Quality control and quality assurance review of the IS/EA.

Rieboldt, Sarah, Paleontologist. B.A. in Biology, University of Colorado, Boulder (*magna cum laude*); Ph.D. in Paleontology, University of California, Berkeley; 15 years of experience in the paleontology and geology fields. Contribution: Preparer of the Paleontological Identification Report and Paleontological Evaluation Report.

Strudwick, Ivan, Associate/Archaeologist. B.A. in Anthropology, California State University, Long Beach; M.A. in Anthropology (*magna cum laude*) with Specialization in Archaeology, California State University, Long Beach; 34 years of experience in the archaeology field. Contribution: Preparation of the Archaeological Survey Report.

Tibbet, Casey, Associate/Architectural Historian. B.A. in Political Science, University of California, Riverside; M.A. in History/Historic Preservation, University of California, Riverside; 28 years of experience in city planning and architectural history in California. Contribution: Preparation of the Historic Resources Evaluation Report and Historic Property Survey Report.

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Chapter 6 Distribution List

The following entities have been notified that this Draft Initial Study/Environmental Assessment (IS/EA) is available for public review. In addition, all property owners and occupants within a 1,000-foot radius of the project limits will be provided the Notice of the Availability of the Draft IS/EA.

6.1 Federal Agencies

U.S. Army Corps Engineers, Los Angeles District
Col. Kimberly Colloton
915 Wilshire Blvd.
Los Angeles, CA 90017-3401

United States Fish and Wildlife Service
Sally Brown
Carlsbad Field Office
2177 Salk Ave., Ste. 250
Carlsbad, CA 92008

Federal Emergency Management Agency
Alessandro Amaglio, Environment and Historic Preservation, Region IX
1111 Broadway, Ste. 1200
Oakland, CA 94607

U.S. EPA Pacific Southwest, Region IX Office
Debbie Lowe Liang
75 Hawthorne St., Mail Code ENF-4-2
San Francisco, CA 94105

U.S. National Marine Fisheries Service
Bryant Chesney
501 W. Ocean Blvd., Ste. 4200
Long Beach, CA 90802-4221

U.S. Department Of Transportation
Director
West Building, 1200 New Jersey Ave., SE
Washington, DC 20590

U.S. Army Corps Engineers, Los Angeles District
James Fields
915 Wilshire Blvd.
Los Angeles, CA 90017

U.S. Army Corps Engineers, Los Angeles District
Josephine Axt
915 Wilshire Blvd.
Los Angeles, CA 90017

U.S. Department of the Interior
Director of Env. Policy and Compliance
Main Interior Bldg.
Washington, D.C. 20240

U.S. Army Corps Engineers, Los Angeles District
Theresa Kaplan
915 Wilshire Blvd.
Los Angeles, CA 90017

U.S. Army Corps of Engineers, Regulatory Division
Theresa Stevens, Ph.D.
2151 Allessandro Dr.
Ventura, CA 93001

6.2 State Agencies

California Department of Conservation
David Bunn, Director
801 K St. MS 24-01
Sacramento, CA 95814

California Department of Water Resources
Mark Cowin, Director
1416 9th St.
Sacramento, CA 95814

California Air Resources Board
Cynthia Marvin
1001 I St.
P.O. Box 2815
Sacramento, CA 95812

California Air Resources Board
Peggy Taricco
1001 I St.
P.O. Box 2815
Sacramento, CA 95812

State Water Resources Control Board
Darrin Polhemus, Deputy Director
1001 I St.
Sacramento, CA 95814

California State Lands Commission
Jennifer Lucchesi
100 Howe Ave., Ste. 100-S
Sacramento, CA 95825-8202

California Deptartment of Fish and Wildlife
Loni Adams
3883 Ruffin Rd.
San Diego, CA 92123

California Highway Patrol
Office 530
19700 Hamilton Ave.
Torrance, CA 90502

Native American Heritage Commission
1550 Harbor Blvd., Ste. 100
West Sacramento, CA 95691

Executive Officer
State Clearinghouse
Office of Planning and Research
1400 10th St.
Sacramento, CA 95814

California Transportation Commission
1120 N St., Room 2221 (MS-52)
Sacramento, CA 95814

California Energy Commission
Attn: Executive Director,
Environmental Office
1516 9th St.
Sacramento, CA 95814

California Public Utilities Commission
Attn: Director
320 W. 4th St., Ste. #500
Los Angeles, CA 90013

California Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Cal Fire Southern Region Operations
2524 Mulberry St.
Riverside, CA 92501

Ms. Julianne Polanco, SHPO
Office of Historic Preservation
Department of Parks & Recreation
1725 23rd St., Ste. 100
Sacramento, CA 95816

California Coastal Commission
Larry Simon
45 Fremont St., Ste. 1900–2000
San Francisco, CA 94105-2219

California Department of Toxic Substance Control
Maryam Tasnif-Abbasi
5796 Corporate Ave.
Cypress, CA 90630-4732

State Historic Preservation Office
Carol Roland-Nawi
1725 23rd St., Ste. 100
Sacramento, CA 95816

California State Clearinghouse
Office of Planning & Research
1400 10th St.
Sacramento, CA 95814

California Department of Transportation
Dianna Watson
100 S. Main St.
Los Angeles, CA 90012

California Transit Association
Joshua Shaw, Director
1415 L St., Ste. 1000
Sacramento, CA 95814

Cal/EPA
Shankar Prasad
P.O. Box 2815
Sacramento, CA 95812

6.3 Regional/County Agencies

Southern California Association of Governments
Intergovernmental Review
818 W. 7th St., 12th Floor
Los Angeles, CA 90017-3435

RWQCB, Los Angeles Region
Deborah Smith
320 W. 4th St., Ste. 200
Los Angeles, CA 90013

South Coast Air Quality Management District
Michael Krause
21865 Copley Dr.
Diamond Bar, CA 91765-4178

South Coast Air Quality Management District
Elaine Chang
21865 Copley Dr.
Diamond Bar, CA 91765

South Coast Air Quality Management District
Peter Greenwald
21865 Copley Dr.
Diamond Bar, CA 91765

Office of Environmental Health and Hazards (OEHHA)
Melanie Marty
P.O. Box 4010
Sacramento, CA 95812-4010

Los Angeles Department of Water and Power
Martin L. Adams, Chief Operating Officer
111 N. Hope St., #1221
Los Angeles, CA 90012

Los Angeles County Sheriff's Department
Sheriff Jim McDonnell
211 W. Temple St.
Los Angeles, CA 90012

Los Angeles County Fire Department
Environmental Review Unit
12605 Osborne St.
Pacoima, CA 91331-2129

County of Los Angeles Parks/Recreation
John Wicker
433 S. Vermont Ave.
Los Angeles, CA 90020

Southern California Gas Company
George Minter
555 W. 5th St.
Los Angeles, CA 90051

Metropolitan Transportation Authority
LACMTA Development Review
1 Gateway Plaza MS 99-23-4
Los Angeles, CA 90012

Los Angeles County Clerk
12400 Imperial Highway
Norwalk, CA 90650

RWCQB, Watershed Regulatory Section
Jun Zhu
320 W. 4th St., Ste. 200
Los Angeles, CA 90013

LA County Planning Dept.
Richard J. Bruckner
320 W. Temple St.
Los Angeles, CA 90012

Los Angeles Unified School District, OEHS
Gwenn Godek, CEQA Advisor
333 S. Beaudry Ave., 21st Floor
Los Angeles, CA 90017

Port of Long Beach
Heather Tomely
P.O. Box 570
Long Beach, CA 90801

Riverside County Transportation Commission, Chair
Marion Ashley
P.O. Box 12008
Riverside, CA 92502-2208

San Bernardino Associated Governments
Raymond Wolfe
1170 W. 3rd St.
San Bernardino, CA 92410

San Bernardino Associated Governments (SANBAG)
L. Dennis Michael
1170 W. 3rd St., 2nd Floor
San Bernardino, CA 92410-1715

6.4 Local Agencies

Kevin James, President
Public Works Department
City of Los Angeles
200 N. Spring St., Room 361
Los Angeles, CA 90012-4801

City of Los Angeles
Richard H. Llewellyn, Jr., City Admin. Officer
200 North Main St., Ste. 1500
Los Angeles, CA 90012-4190

City of Los Angeles Chamber of Commerce
350 S. Bixel St.
Los Angeles, CA 90017

City of Los Angeles Harbor Department
Guillermo Martinez
425 S. Palos Verdes St.
San Pedro, CA 90731

Los Angeles City Clerk's Office
200 N. Spring St., Rm. 360
Los Angeles, CA 90012

LA City Library Department, San Pedro Branch
Head Librarian
931 S. Gaffey St.
San Pedro, CA 90731

LA City Library Department, Wilmington Branch
Head Librarian
1300 N. Avalon
Wilmington, CA 90744

LA City Bureau of Sanitation
Christopher DeMonbrun
2714 Media Center Dr.
Los Angeles, CA 90065

LA City Fire Department
Ralph Terrazas
200 N. Main St., 16th Floor
Los Angeles, CA 90012

LA City Library Department
Head Librarian
630 W. 5th St.
Los Angeles, CA 90071

LA City Bureau Of Sanitation
Ernique Zaldivar
1149 S. Broadway St., Ste. 900
Los Angeles, CA 90015-2213

LA City Department of Building & Safety
Raymond Chan
201 N. Figueroa St.
Los Angeles, CA 90012

LA City Department of Public Works
Maria Martin
1149 S. Broadway, Ste. 600
Los Angeles, CA 90015

LA City Department of Transportation
Seleta Reynolds
100 S. Main St., 10th Floor
Los Angeles, CA 90012

LA City Department of Water And Power
Director, Environmental Affairs
111 N. Hope St.
Los Angeles, CA 90012

LA City Planning Department
Michael LoGrande
200 N. Spring St., 5th Floor CH
Los Angeles, CA 90012-2601

City Attorney's Office, City of Riverside
3900 Main St.
Riverside, CA 92522

City of Rancho Palos Verdes
Joel Rojas
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275

Fifteenth Council District Office
Joe Buscaino
638 Beacon St., Ste. 552
San Pedro, CA 90731

San Pedro Chamber Of Commerce
President
390 W. 7th St.
San Pedro, CA 90731

Wilmington Chamber Of Commerce
President
544 N. Avalon Blvd., Ste. 104
Wilmington, CA 90744

Carson City Planning Division
Peter Raktiprakorn
701 E. Carson St.
Carson, CA 90745

City of Lomita Community Development
Gary Sugano
24300 Narbonne Ave.
Lomita, CA 90717

City of Long Beach Planning Bureau
Jeff Winklepleck
333 W. Ocean Blvd.
Long Beach, CA 90802

City of Rolling Hills Planning Department
Yolanta Schwartz
2 Portuguese Bend Rd.
Rolling Hills, CA 90274

City of Long Beach Dept. of Dev. Services
Amy Bodek
333 W. Ocean Blvd.
Long Beach, CA 90802

City Manager's Office, City of Long Beach
Patrick West
333 W. Ocean Blvd.
Long Beach, CA 90802

6.5 Native American Representatives

Barbareño/Ventureño Band of Mission Indians
Julie Lynn Tumamait-Stenslie, Chair
365 N. Poli Ave.
Ojai, CA 93023

Barbareño/Ventureño Band of Mission Indians
Patrick Tumamait
992 El Camino Corto
Ojai, CA 93023

Barbareño/Ventureño Band of Mission Indians
Eleanor Arrellanes
P.O. Box 5687
Ventura, CA 93005

Barbareño/Ventureño Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Ct.
Camarillo, CA 93012

Fernandeño Tataviam Band of Mission Indians
Rudy Ortega Jr., Tribal President
1019 2nd St., Ste. 1
San Fernando, CA 91340

Gabrieleno Band of Mission Indians – Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA 91723

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA 91778

Gabrielino/Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aliso St., #231
Los Angeles, CA 90012

Gabrielino-Tongva Tribe
Linda Candelaria
23454 Vanowen St.
West Hills, CA 91307

Gabrielino-Tongva Tribe
Charles Alvarez, Chairperson
23454 Vanowen St.
West Hills, CA 91307

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella, CA 93283

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio St.
Bakersfield, CA 93305

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322

San Manuel Band of Mission Indians
Lee Clauss, Director-CRM Dept
26569 Community Center Dr.
Highland, CA 92346

San Manuel Band of Mission Indians
Lynn Valbuena
26569 Community Center Dr.
Highland, CA 92346

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517
Santa Ynez, CA 93460

Soboba Band of Luiseño Indians
Joseph Ontiveros, Cultural Resource Department
P.O. Box 487
San Jacinto, CA 92581

6.6 Elected Officials—Federal

Hon. Dianne Feinstein, Member
United States Senate
11111 Santa Monica Blvd., Ste. #915
Los Angeles, CA 90025-3343

Hon. Kamala Harris, Member
United States Senate
312 S. Spring St., Ste. 1748
Los Angeles, CA 90012

Hon. Alan Lowenthal
47th Congressional District
United States House of Representatives
100 W. Broadway
West Tower Ste. 600
Long Beach, CA 90802

6.7 Elected Officials—State

Hon. Patrick O'Donnell
70th Assembly District
461 W. 6th St., #209
San Pedro, CA 90731

6.8 Elected Officials—Local

Mayor Eric Garcetti
200 N. Spring St., Rm. 303
Los Angeles, CA 90012

Joe Buscaino, Councilmember
200 N. Spring St., Rm. 410
Los Angeles, CA 90012

6.9 Libraries

San Pedro Regional Library
931 S. Gaffey St.
San Pedro, CA 90731

6.10 Interested Groups, Organizations, and Individuals

Coastal San Pedro Neighborhood Council
Anna Erneholm Pesusich, Chair
1840 S. Gaffey St.., Box 34
San Pedro, CA 90731

Tim McOsker
Chairman
San Pedro Chamber of Commerce
390 W. 7th St.
San Pedro, CA 90731

Kevin Johnson
2288 Buena Vista Ave.
Livermore, CA 94550

Coalition for Clean Air
Dr. Joseph Lyou
660 S. Figueroa, Ste. 1140
Los Angeles, CA 90017

Natural Resources Defense Council
David Pettit
1314 2nd St.
Santa Monica, CA 90401

Banning Park Neighborhood Association
Simie Seaman
1217 Lakme Ave.
Wilmington, CA 90744

Best Best & Krieger LLP
Steven DeBaun
3390 University Ave., 5th Floor
Riverside, CA 92501

Central San Pedro Neighborhood Council
Sue Castillo
1840 S. Gaffey St.
San Pedro, CA 90731

Central San Pedro Neighborhood Council
James Preston Allen
1840 S. Gaffey St.
San Pedro, CA 90731

Coastal San Pedro Neighborhood Council
James Dimon
3805 S. Pacific Ave., #1
San Pedro, CA 90731

Coastal San Pedro Neighborhood Council
Mike Browne
1462 Paseo del Mar
San Pedro, CA 90731

Coalition for a Safe Environment
Jesse Marquez
1601 N. Wilmington Blvd., Ste. B
Wilmington, CA 90744

Eartth Justice
Adrian Martinez
800 Wilshire Blvd., Ste. 1000
Los Angeles, CA 90017

Heal the Bay
Alix Hobbs
1444 9th St.
Santa Monica, CA 90401

Keck School of Medicine of USC
Andrea Hricko
2001 N. Soto St.
Los Angeles, CA 90032

John S. Peterson Law Group
John S. Peterson
633 W. 5th St.
Los Angeles, CA 90071

Los Angeles Conservancy
Adrian Fine
523 W. 6th St., Ste. 826
Los Angeles, CA 90014

NW San Pedro Neighborhood Council
Ray Regalado
638 S. Beacon St., Box 688
San Pedro, CA 90731

Pacific Maritime Shipping Association
Thomas Jelenic
One World Trade Center, 17th Floor
Long Beach, CA 90831

San Pedro Peninsula Homeowners United
Janet Gunter
P.O. Box 749
San Pedro, CA 90733

San Pedro Peninsula Homeowners United
Kathleen Woodfield
505 S. Bandini St.
San Pedro, CA 90731

San Pedro Bay Historical Society
President
638 S. Beacon St., Room 626
San Pedro, CA 90731

Wilmington Historical Society
President
309 W. Opp St.
Wilmington, CA 90744

Wilmington Neighborhood Council
Cecilia Moreno
544 N. Avalon Blvd.
Wilmington, CA 90744

Wilmington Neighborhood Council
Dan Domonske
544 N. Avalon Blvd.
Wilmington, CA 90744

HCNC
Ray Moser
26035 Frampton Ave.
Harbor City, CA 90710

Interested Parties within 1,000 feet of the Project:

La City
P.O. Box 151
San Pedro, CA 90733

Long Beach City
P.O. Box 570
Long Beach, CA 90801

LA Unified School District
C/O Facilities Services Division
333 S. Beaudry Ave.
Los Angeles, CA 90017

585 Bonita St
San Pedro, CA 90731

589 Bonita St
San Pedro, CA 90731

514 N. Grand Ave.
San Pedro, CA 90731

518 N. Grand Ave.
San Pedro, CA 90731

31 E. Neapolitan Ln.
Long Beach, CA 90803

553 N. Pacific Coast Hwy.
Ste. B Pmb432
Redondo Beach, CA 90277

1621 W. 25th St., #671
San Pedro, CA 90732

1519 Post Ave.
Torrance, CA 90501

565 W. Macarthur Ave.
San Pedro, CA 90731

827 Bejay Pl.
San Pedro, CA 90731

1831 Barrywood Ave.
San Pedro, CA 90731

1413 W. Sandison St.
Wilmington, CA 90744

P.O. Box 515381 Pmb 36225
Los Angeles, CA 90051

519 W. Macarthur Ave.
San Pedro, CA 90731

511 W. Macarthur Ave.
San Pedro, CA 90731

505 W. Macarthur Ave.
San Pedro, CA 90731

582 W. Upland Ave.
San Pedro, CA 90731

574 W. Upland Ave.
San Pedro, CA 90731

568 W. Upland Ave.
San Pedro, CA 90731

562 W. Upland Ave.
San Pedro, CA 90731

550 W. Upland Ave.
San Pedro, CA 90731

544 W. Upland Ave.
San Pedro, CA 90731

420 W. Elberon Ave.
San Pedro, CA 90731

589 W. Upland Ave.
San Pedro, CA 90731

583 W. Upland Ave.
San Pedro, CA 90731

579 W. Upland Ave.
San Pedro, CA 90731

312 14th St.
Santa Monica, CA 90402

567 W. Upland Ave.
San Pedro, CA 90731

561 W. Upland Ave.
San Pedro, CA 90731

555 W. Upland Ave.
San Pedro, CA 90731

570 W. Elberon Ave.
San Pedro, CA 90731

4 Hillcrest Manor
Rolling Hills Estates, CA 90274

P.O. Box 88008
Los Angeles, CA 90009

505 W. Elberon Ave., #1
San Pedro, CA 90731
(Mailed to All Units)

519 W. Elberon Ave.
San Pedro, CA 90731

1089 Via Cordova
San Pedro, CA 90732

429 W. Elberon Ave.
San Pedro, CA 90731

433 W. Elberon Ave.
San Pedro, CA 90731

439 W. Elberon Ave.
San Pedro, CA 90731

445 W. Elberon Ave.
San Pedro, CA 90731

2015 Manhattan Beach Blvd., #100
Redondo Beach, CA 90278

457 W. Elberon Ave.
San Pedro, CA 90731

457 W. Elberon Ave.
San Pedro, CA 90731

409 W. Elberon Ave., #1
San Pedro, CA 90731
(Mailed to All Units)

6239 Maris Ave.
Pico Rivera, CA 90660

P.O. Box 393
Cayucos, CA 93430

408 S. Irena Ave.
Redondo Beach, CA 90277

530 Bonita St.
San Pedro, CA 90731

23664 Susana Ave.
Torrance, CA 90505

578 Bonita St.
San Pedro, CA 90731

560 Bonita St.
San Pedro, CA 90731

3926 Wilshire Blvd.
Los Angeles, CA 90010

117 38th St., #1
Manhattan Beach, CA 90266

535 Bonita St.
San Pedro, CA 90731

7109 Minnetonka Blvd.
St Louis Park, MN 55426

1368 Oakhorne Dr.
Harbor City, CA 90710

661 N. Pacific Ave.
San Pedro, CA 90731

510 W. Bonita St.
San Pedro, CA 90731

572 Bonita St.
San Pedro, CA 90731

578 Bonita St.
San Pedro, CA 90731

914 Statler St.
San Pedro, CA 90731

551 Bonita St.
San Pedro, CA 90731

531 Bonita St.
San Pedro, CA 90731

554 Bonita St.
San Pedro, CA 90731

536 Bonita St.
San Pedro, CA 90731

560 Bonita St.
San Pedro, CA 90731

1065 Lomita Blvd. Spc469
Harbor City, CA 90710

566 Bonita St.
San Pedro, CA 90731

576 Bonita St.
San Pedro, CA 90731

569 Bonita St.
San Pedro, CA 90731

1321 W. Park Western Dr., #7
San Pedro, CA 90732

Appendix A Title VI Policy Statement

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Transmittal No. 2

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

April 2018

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

LAURIE BERMAN
Director

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Appendix B Summary of Relocation Benefits

B.1 Declaration of Policy

"The purpose of this title is to establish a ***uniform policy for fair and equitable treatment*** of persons displaced as a result of federal and federally assisted programs in order that such persons ***shall not suffer disproportionate injuries*** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations (CFR) Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

B.2 Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the City of Los Angeles Harbor Department (LAHD) and/or the California Department of Transportation (Caltrans) will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. LAHD and/or Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe, and sanitary." Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color,

religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe, and sanitary" replacement dwelling, available on the market, is offered to them by LAHD.

B.3 Nonresidential Relocation Assistance

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocations. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

B.3.1 Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

B.3.2 Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to $25,000 for reasonable expenses actually incurred.

B.3.3 Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses which meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $40,000.

B.4 Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, except for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization which has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from LAHD or the Caltrans' Right-of-Way and Land Surveys Manual. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Additional information on relocation benefits to affected non-residential properties and uses is provided in the attachment titled "Your Rights and Benefits as a Displaced Business, Farm or Nonprofit Organization under the Uniform Relocation Assistance Program" provided in English starting on the following page. The same attachment is provided in Spanish following the last page of the English attachment.

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Appendix C 2016 RTP and 2017 FTIP Project Listings

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TABLE 2 Modifications to RTP Projects

#	COUNTY	LEAD AGENCY	RTP ID	SYSTEM	ROUTE	DESCRIPTION	COMPLETION YEAR	COST ($1,000's)	FISCAL IMPACT	REASON FOR AMENDMENT
1	LOS ANGELES	PORT OF LOS ANGELES	1120007	EXISTING: LOCAL HIGHWAY --- REVISED: STATE HIGHWAY	EXISTING: -- --- REVISED: SR-47	EXISTING: SR 47/V. THOMAS BRIDGE/HARBOR BLVD. INTERCHANGE: NEW WESTBOUND SR 47 OFF-RAMP; REALIGNED EB SR 47 ON-RAMP, WEAVE AND SR ON-RAMP MERGE; FRONT STREET IS NHS CONNECTOR ROUTE; V. THOMAS BRIDGE IS A STATE-OWNED BRIDGE; ON THE USDOT "PRIMARY FREIGHT NETWORK" (PFN) --- REVISED: SR 47-V. THOMAS BRIDGE/FRONT ST INTERCHANGE: NEW WESTBOUND SR 47 ON- AND OFF-RAMPS AT FRONT STREET JUST WEST OF THE VINCENT THOMAS BRIDGE AND ELIMINATE THE EXISTING NON-STANDARD RAMP CONNECTION TO THE HARBOR BOULEVARD OFF-RAMP; FRONT STREET IS AN NHS CONN	2023	$17,400	NO CHANGE TO RTP PROJECT COST. NO FISCAL IMPACT.	REVISED SYSTEM, ROUTE, AND DESCRIPTION.
2	LOS ANGELES	LOS ANGELES COUNTY MTA	11620001	OTHER	LOS ANGELES RIVER	LA RIVER WATERWAY & SYSTEM BIKEPATH (FROM RIVERSIDE DRIVE TO ATLANTIC BLVD)	2025	$423,200	NEW RTP PROJECT COST.	NEW PROJECT
3	LOS ANGELES	LOS ANGELES COUNTY MTA	11620002	OTHER	LOS ANGELES RIVER	COMPLETE LA RIVER BIKEPATH (FROM VANALDEN AVE TO FOREST LAWN DR AT SR-134)	2025	$69,600	NEW RTP PROJECT COST.	NEW PROJECT
4	LOS ANGELES	LOS ANGELES COUNTY MTA	11620003	OTHER	VARIOUS	METRO ACTIVE TRANSPORT, TRANSIT 1ST/LAST MILE PROGRAM (SYSTEM CONNECTIVITY PROJECTS (NO SUBREGION)	2040	$831,427	NEW RTP PROJECT COST.	NEW PROJECT
5	LOS ANGELES	LOS ANGELES COUNTY MTA	11620004	OTHER	VARIOUS	MODAL CONNECTIVITY AND COMPLETE STREETS PROJECTS (ARROYO VERDUGO)	2040	$195,858	NEW RTP PROJECT COST.	NEW PROJECT
6	LOS ANGELES	LOS ANGELES COUNTY MTA	11620005	OTHER	VARIOUS	MULTIMODAL CONNECTIVITY PROGRAM (NORTH COUNTY)	2040	$164,137	NEW RTP PROJECT COST.	NEW PROJECT

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2017 Federal Transportation Improvement Program

Los Angeles County
State Highway
Including Amendments 1-18
(in $000`s)

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
LA0G896	Los Angeles	MDAB		1AL04	CAX62	14	59.55	60.03			S	NON-EXEMPT	0
Description:							PTC	25,000			Agency	PALMDALE	

Wdn off-ramps to 3 lanes: 2 left, 1 right onto Palmdale Blvd; Wdn NB SR-14 for auxiliary lane; modify NB loop on-ramp for right turn pocket; Modify 2 ramp intersections to stop left turn movement to merge freely onto Palmdale Blvd; Provide EB right turn lane from Palmdale Blvd to Div, St; Modify Palmdale Blvd for double left turns from ramps; Modify Palmdale Blvd for 3 WB through lanes through SB ramp intersection; Modify SB off ramp allowing widening from Ave Q - Palmdale Blvd - under LA0G897

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
MEASURE R	3,000	750	21,250	25,000	2,100	1,650		21,250				25,000
LA0G896 Total	3,000	750	21,250	25,000	2,100	1,650		21,250				25,000

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
LA0G898	Los Angeles	MDAB		1AL04	CAX60	14	63.67	63.67			S	NON-EXEMPT	0
Description:							PTC	20,000			Agency	PALMDALE	

Palmdale Improvement of SR 14 on and off ramps at Ave N; Install traffic signals/signal interconnect and intersection widening at SR 14/Ave N on and off ramp locations; Improve SR 14/Ave N bridge structure; improve Ave N between SR 14 & 10th W; construct additional mainline improvements on SR 14 near Ave N on and off ramp approaches.

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
MEASURE R	3,300	5,500	11,200	20,000	800	2,500	5,500		11,200			20,000
LA0G898 Total	3,300	5,500	11,200	20,000	800	2,500	5,500		11,200			20,000

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
LA0G930	Los Angeles	MDAB		7120005	NCN25	14	65.68	65.68			S	EXEMPT - 93.126	2
Description:							PTC	5,000			Agency	LANCASTER	

SR-138 (SR-14)/Avenue L Interchange Improvements. Improvements include operational improvements for vehicle, bicycle and pedestrian safety and flow including restriping, realignments, other intersection control modifications on Avenue L at the SR-14 ramps and improvements along Avenue L between 20th Street West and 10th Street West intersections.

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
MEASURE R	850	350	3,800	5,000	200	100	900		3,800			5,000
LA0G930 Total	850	350	3,800	5,000	200	100	900		3,800			5,000

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
LA0D391	Los Angeles	SCAB		1AL04	STUDY	47					S	EXEMPT - 93.126	10
Description:							PTC	1,840			Agency	PORT OF LOS ANGELES	

VINCENT THOMAS BRIDGE STUDY - DEVELOP AND ANALYZE ALTERNATIVES TO INCREASE NEEDED CAPACITY. SAFETEA-LU HPP # 297 NON-CAPACITY. CALIFORNIA'S EARMARK REPURPOSING EFFORT 2016-DEMO ID: CA337, $1,439,840

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
LOCAL TRANS FUNDS	1,440			1,440		1,440						1,440
PORT FUNDS	400			400		400						400
LA0D391 Total	1,840			1,840		1,840						1,840

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment
LA0G1290	Los Angeles	SCAB		7120018	STUDY	47	.86	.86			S	EXEMPT - 93.126	2
Description:							PTC	1,500			Agency	PORT OF LOS ANGELES	

Prepare Caltrans Project Study Report (PSR), Project Report (PR), preliminary plans and Environmental Documentation (ED) reports to obtain Caltrans approval and Environmental clearance for the SR 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project.

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
AGENCY	1,000			1,000	1,000							1,000

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Appendix D Avoidance Minimization and/or Mitigation Summary

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following program (as articulated on the proposed Environmental Commitments Record [ECR] that follows) would be implemented. During project design, avoidance and/or minimization measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term maintenance and monitoring will take place, as applicable. As the following ECR is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Note that some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.

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Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
HUMAN ENVIRONMENT									
Land Use									
Project Features									
No project features are required.									
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Community Impacts									
Project Features									
PF-C-1 Restoration of TCEs. After construction, the TCEs used for the Build Alternative would be restored to their original pre-project conditions to the extent feasible. Because construction would disturb vegetation, new and disturbed slopes would be landscaped and irrigated to match existing conditions and to the extent necessary to ensure adequate erosion control. Owners of the parcels affected by TCEs would be compensated for temporary use of their property during construction.	Caltrans Project Engineer, and Landscape Architect	Post construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Utilities and Emergency Services									
Project Features									
PF-UES-1: During final design, utility relocation plans will be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in-place. If relocation is necessary, the final design will focus on relocating utilities within existing public rights-of-way (ROWs) and/or easements. If relocation outside of existing ROWs or additional public ROWs and/or easements are necessary, the final design will focus on relocating those facilities to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. Utility relocations are anticipated to be completed by the various utility owners prior to or during construction. Prior to utility relocation activities, the contractor will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance about the date and timing of potential service disruptions.	Caltrans Project Engineer	During PS&E Prior to and during construction Prior to utility relocation activities	No						
PF-UES-2 Prior to and during construction, the contractor will coordinate all temporary ramp and arterial roadway closures and detour plans with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times. This will include the identification of alternative routes for emergency vehicles and development of routes across the construction areas in coordination with the affected agencies.	Caltrans Project Engineer	Prior to and during construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Traffic and Transportation/Pedestrian and Bicycle Facilities									
Project Features									
PF-T-1: Transportation Management Plan. A Final Transportation Management Plan (TMP) will be developed in detail during final design. The TMP will be implemented by the construction contractor during	Caltrans Traffic Engineer	During PS&E and project construction	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
project construction to address short-term traffic circulation and access effects during project construction. Specifically, if a TMP is prepared during final design, a qualified traffic engineer will prepare the TMP, which will include, but not be limited to, the elements described below to reduce traveler delays and enhance traveler safety during project construction. The TMP will be approved by the City of Los Angeles (City) and California Department of Transportation (Caltrans) District 7 during final design and will be incorporated into the plans, specifications, and estimates for implementation by the construction contractor. The purpose of the TMP is to address short-term traffic and transportation impacts during construction of the project. The objectives of the TMP are to: • Maintain traffic safety during construction • Effectively maintain an acceptable level of traffic flow throughout the transportation system during construction • Minimize traffic delays and facilitate reduction of the overall duration of construction activities • Minimize detours and impacts to pedestrians and bicyclists • Foster public awareness of the proposed project and related transportation and traffic impacts The TMP will contain, but not be limited to, the following elements intended to reduce traveler delay and enhance traveler safety. These elements will be refined during final design and incorporated in the TMP for implementation during proposed project construction. • **Public Information/Public Awareness Campaign (PAC).** The primary goal of the PAC is to educate motorists, business owners and operators, residents, elected officials, and government agencies about project construction activities and associated transportation impacts. The PAC is an important tool for reaching target audiences with important construction project information and is anticipated to include, but not be limited to: • Rideshare information • Brochures and mailers • Media releases • Paid advertising • Public meetings • Broadcast fax and email services • Telephone hotline									

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
• Notification to targeted groups • Commercial traffic reporters/feeds • Project website • Visual information • Local cable television and news • Internet postings • **Traveler Information Strategies.** The effective implementation of a traveler information system during construction is crucial for enabling motorists to make informed decisions about their travel plans and options with real-time traffic information. That real-time traffic information will include information on mainline, ramp, lane, and arterial closures and detours; travel delays; access to adjacent land uses; “businesses are open” signing; and other signing and information to assist travelers in navigating through, around, and in construction areas. Key components of the traveler information system are anticipated to include, but not be limited to: • Fixed and portable changeable message signs • Ground-mounted signs • Automated work zone information systems • Highway advisory radio • Lane closure website • Caltrans highway information network • Bicycle and pedestrian information • Commute Smart website • **Incident Management.** Effective incident management will ensure that incidents in and near construction areas are cleared quickly and do not result in substantial delays for the traveling public in the vicinity of work zones. Incident management includes, but is not limited to: • Caltrans Construction Zone Enhanced Enforcement Program (COZEEP) • Freeway Service Patrol • Traffic surveillance stations • Caltrans Transportation Management Center • Traffic management team • Towing services • **Construction Strategies.** The TMP will include procedures to lessen the transportation effects of project-related construction activities and will include, but not be limited to, consideration of the following:									

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
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• Conflicts with other projects and special events
• Construction staging alternatives
• Mainline lane closures
• Local road closures
• Ramp and connector closures (no two consecutive on- or off-ramps in the same direction will be closed at the same time)
• Pedestrian and bicycle detours and facility closures
• Traffic control improvements
• Coordination with other projects
• Project phasing
• Traffic screens
• Truck traffic restrictions
• **Demand Management.** Temporarily reducing the overall traffic volumes on the project segment of State Route (SR) 47 could reduce the short-term adverse effects of construction on traffic operations. The TMP will include, but not be limited to, the following strategies that could reduce vehicular demand in the study area during project construction:
  • Rideshare incentives
  • Transit services
  • Shuttle services
  • Variable work hours and telecommuting
  • Park-and-ride lots
• **Alternate Route Strategies.** The TMP will provide strategies for notifying motorists, pedestrians, and bicyclists of planned construction activities. This notification will allow travelers to make informed decisions about their travel plans, including the consideration of possible alternate routes. The TMP will finalize the detour and alternate routes for motorists, specifically addressing the following:
  • Mainline lane closures
  • Ramp/connector closures
  • Local road closures
  • Temporary highway or shoulder use
  • Local street improvements
  • Temporary detours and closures of bicycle and pedestrian facilities
  • Traffic signal coordination
The construction contractor will implement the measures in the TMP during construction.									

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Visual/Aesthetics									
Project Features									
PF-VIS-1 Preservation of Existing Landscape. Damage to existing vegetation (especially mature, established trees) within the project limits or in close proximity to the project limits shall be minimized as much as possible.	Caltrans Project Engineer	During PS&E and project construction	No						
PF-VIS-2 Replacement Landscape and Irrigation in Areas Impacted by Construction. All areas disturbed by the proposed roadway improvements or grading operations will receive replacement planting (with native and/or drought resistant plants) where feasible to lessen the impacts of construction. All proposed landscaping within State right-of-way will utilize California Department of Transportation (Caltrans) approved plant materials and match existing in-kind plant species. All proposed landscaping will conform to the latest Model Water Efficient Landscape Ordinance.	Caltrans Project Engineer, and Landscape Architect	During PS&E, post construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
VIS-3 Aesthetic Treatments for New Retaining Walls and Elevated Features. To reduce the visual impact of new retaining walls and other elevated structures, the use of aesthetic treatments consisting of color, textures, and/or artistic designs compatible with existing walls/structures shall be determined.	Caltrans Project Engineer	During PS&E	Yes						
Cultural Resources									
Project Features									
PF-CR-1: Discovery of Cultural Materials. If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor will divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. At that time, coordination will be maintained with the California Department of Transportation (Caltrans) District 7 Environmental Branch Chief or the District 7 Native American Coordinator to determine an appropriate course of action. If the discovery of cultural materials occurs outside the Caltrans right-of-way, then coordination with the appropriate local agency will be conducted.	Caltrans Project Engineer, Archaeologist, and Resident Engineer	During construction and post construction (if necessary)	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
PF-CR-2: **Discovery of Human Remains.** If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who pursuant to California Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendant (MLD). At that time, the persons who discovered the remains will contact the Caltrans District 7 Environmental Branch Chief or the District 7 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of California PRC 5097.98 are to be followed as applicable.	Caltrans Project Engineer, Caltrans Archaeologist, and Resident Engineer	During construction and post construction (if necessary)	No						
Avoidance, Minimization, and/or Mitigation Measures									
CR-3 **Cultural Training.** The Kizh Nation will be involved in any cultural training prior to construction.	Qualified Archaeologist and Caltrans Resident Engineer	Prior to construction	No						
CR-4 **Field Spot Checks.** Supervised field spot checks will be conducted with the Kizh Nation during construction	Qualified Archaeologist and Caltrans Resident Engineer	During construction and post construction (if necessary)	No						
PHYSICAL ENVIRONMENT									
Hydrology and Floodplains									
Project Features									
No project features required.									
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Water Quality and Storm Water Runoff									
Project Features									
PF-WQ-1 Prior to commencement of construction activities, the City of Los Angeles Harbor Department (LAHD) shall obtain coverage for the Build Alternative under the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]) Order No. 2009-0009-DWQ, as amended by 2010 0014-DWG and 2012-0006- DWQ, NPDES No. CAS000002, or any other subsequent permit. This shall include submission of Permit Registration Documents, including a Notice of Intent for coverage under the permit to the SWRCB via the Storm Water Multiple Application and Report Tracking System (SMARTS). Construction activities shall not commence until a Waste Discharge Identification Number is obtained from SMARTS. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) to ensure that the potential for soil erosion, sedimentation, and	Caltrans Resident Engineer	Prior to construction	No						

Task and Brief Description		Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
	spills is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction activities and stabilization of the site, a Notice of Termination shall be implemented via SMARTS.									
PF-WQ-2	If dewatering is required, construction site dewatering shall comply with one of three orders, or any subsequent orders that apply to groundwater discharges to surface waters within the coastal watersheds of Los Angeles and Ventura counties, depending on the nature of the groundwater. Order No. R4-2013-0095 (NPDES No. CAG994004) covers general discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Los Angeles and Ventura counties. This order will be applicable to the proposed project if it can be demonstrated that the groundwater being discharged to surface waters does not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable State or federal water quality objectives/criteria, or cause acute or chronic toxicity in the receiving water. However, if groundwater in the study area is found to contain volatile organic compounds (VOCs), the proposed project will be subject to Order No. R-4-2013-0043 (NPDES No. CAG914001). Order No. R-4-2013-0043 covers discharges of treated groundwater from investigation and/or cleanup of VOC-contaminated sites to surface waters within the coastal watersheds of Los Angeles and Ventura counties. However, if groundwater in the study area is found to contain petroleum fuel-contaminated sites, the proposed project will be subject to Order No. R-4-2013-0043 (NPDES No. CAG914001). Order No. R4-2013-0042 (NPDES No. CA834001) covers discharges of treated groundwater from investigation and/or cleanup of petroleum fuel-contaminated sites to surface waters within the coastal watersheds of Los Angeles and Ventura counties. Under these orders, permittees are required to monitor their discharges of groundwater extraction waste from construction to ensure that effluent limitations for constituents are not exceeded.	Caltrans Resident Engineer	Prior to and during construction	No						
PF-WQ-3	The City of Los Angeles Harbor Department (LAHD) shall ensure that the Build Alternative complies with the provisions of the NPDES Permit, Statewide Storm Water Permit, WDRs for the State of California, Department of Transportation (Caltrans) Order No. 2012-0011-DWQ, as amended by WQ 2014-0077-DWQ, NPDES No. CAS000003 (Caltrans Permit), or any subsequent permit.	Caltrans Resident Engineer	Prior to and during construction	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
PF-WQ-4 Caltrans-approved Design Pollution Prevention BMPs shall be implemented to the maximum extent practicable (MEP) consistent with the requirements of the Caltrans Permit. Design Pollution Prevention BMPs include preservation of existing vegetation and revegetation or replacement planting of disturbed soil areas; surface water collection within Caltrans right-of-way; rip-rap, flared end sections, lining of ditches and swales, and other devices; benches, rounded slopes, and other related measures; and retaining walls.	Caltrans Project Engineer	Prior to and during construction	No						
PF-WQ-5 Caltrans-approved Treatment BMPs shall be implemented to the MEP consistent with the requirements of the Caltrans Permit. Treatment BMPs may include biofiltration swales, biofiltration strips, and infiltration devices, detention devices, and Austin Sand Filters. The results of the geotechnical investigation will determine the final Treatment BMPs.	Caltrans Project Engineer	Prior to and during construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Geology/Soils/Seismic/Topography									
Project Features									
PF-GEO-2 Revegetation. Following completion of construction, revegetation of graded slopes (with native and/or drought resistant plants) shall be performed to minimize erosion. Runoff shall be diverted from each slope face using earthen berms and/or concrete swales at the top of each slope.	Caltrans Project Engineer	Post construction	No						
Avoidance, Minimization, and Mitigation Measures									
GEO-1 Geotechnical Investigation. During the plans, specifications, and estimates (PS&E) phase, qualified geotechnical personnel will conduct a detailed geotechnical investigation to assess the geotechnical conditions at the project area. The geotechnical investigation will include exploratory borings to investigate site-specific soils and conditions and to collect samples of subsurface soils for laboratory testing. Those soil samples will be tested to evaluate liquefaction potential, collapsibility potential, stability, expansive properties, and corrosion potential. The proposed project-specific findings and recommendations of the geotechnical investigation will be summarized in a Foundation Report and a Geotechnical Design Report to be submitted to the California Department of Transportation (Caltrans) for review and approval. Those findings and recommendations will be incorporated in the final design of the Build Alternative.	Caltrans Project Engineer	During PS&E and prior to construction	No						
Paleontology									
Project Features									
No measures are required.									
Avoidance, Minimization, and Mitigation Measures									
PAL-1 Paleontological Mitigation Plan. A qualified paleontologist shall prepare a Paleontological Mitigation Plan (PMP) following the guidelines in the California Department of Transportation (Caltrans) Standard Environmental Reference (SER), Environmental Handbook, Volume 1, Chapter 8 – Paleontology (June 2016 or more current) and guidelines developed by the	Caltrans Paleontologist, Caltrans Project Engineer/ Office Engineer, and Resident Engineer	During PS&E, construction and post construction (if necessary)	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
Society of Vertebrate Paleontology (SVP 2010). The PMP shall be prepared concurrently with final design plans during the plans, specifications, and estimates (PS&E) phase.									
Hazardous Materials									
Project Features									
PF-HAZ-1 Prior to the completion of Plans, Specifications, and Estimates (PS&E), shallow subsurface soil sampling will be conducted for aerially deposited lead (ADL) in unpaved locations immediately adjacent to State Route (SR) 47 for ADL-related impacts. The soil ADL evaluation and/or investigation will be consistent with the new California Department of Toxic Substances Control (DTSC) ADL Agreement contaminant concentration limits. In addition, new DTSC ADL Agreement soil reuse requirements and restrictions will apply.	Caltrans Project Engineer	During PS&E and construction	No						
PF-HAZ-2 During the design phase, the yellow traffic striping and pavement marking materials will be tested for lead and lead chromate. If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the California Department of Transportation (Caltrans) *Construction Manual* (July 2017), Chapter 7, Section 7-107, Hazardous Waste and Contamination.	Caltrans Project Engineer	During PS&E and prior to construction	No						
PF-HAZ-3 Supplemental site investigations, including soil and groundwater investigations performed at the Pacific Rail Line parcel(s), the West Basin Container Terminal, and the Cruise Terminal parcels during the Plans, Specifications, and Estimates (PS&E) phase and prior to any construction activities within these parcels	Caltrans Resident Engineer	PS&E	No						
PF-HAZ-4 During construction, the construction contractor will monitor soil excavation for visible soil staining, odor, and the possible presence of unknown hazardous material sources. If hazardous material contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and to have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans *Construction Manual* (July 2017). Adequate protection to construction workers will be provided through the implementation of a Health and Safety Plan and a Soil Management Plan.	Caltrans Project Engineer	During construction	No						
Avoidance, Minimization, and Mitigation Measures									
No measures are required.									

Task and Brief Description		Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Air Quality										
Project Features										
PF-AQ-1	During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on-site or off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.	Caltrans Resident Engineer	During PS&E and construction	No						
PF-AQ-2	Project grading plans will show the duration of construction. Ozone (O_3) precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.	Caltrans Resident Engineer	During PS&E and construction	No						
PF-AQ-3	All trucks that are to haul excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.	Caltrans Resident Engineer	During PS&E and construction	No						
PF-AQ-4	The contractor will adhere to the California Department of Transportation (Caltrans) Standard Specifications for Construction, Sections 14.9-02 and 14-9.03.	Caltrans Resident Engineer	During PS&E and construction	No						
PF-AQ-5	All construction vehicles both on- and off-site shall be prohibited from idling in excess of five minutes. No idle areas shall be sited within 500 feet of the residences to the south of the project site.	Caltrans Resident Engineer	During construction	No						
Avoidance, Minimization, and Mitigation Measures										
AQ-6	Should the project geologist determine that asbestos-containing materials (ACMs) are present at the project study area during final inspection prior to construction, the appropriate methods will be implemented to remove ACMs.	Caltrans Resident Engineer	Prior to Construction	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
Noise									
Project Feature									
PF-N-1 The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, "Noise Control." The nighttime noise level from the contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., will not exceed 86 A-weighted decibels (dBA) one-hour A weighted equivalent continuous sound level (Leq(h)) at a distance of 50 feet. In addition, the contractor will equip all internal combustion engines with a manufacturer-recommended muffler and will not operate any internal combustion engine on the job site without the appropriate muffler.	Caltrans Resident Engineer	During PS&E and construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
N-2 Noise Barrier Nos. 2 and 367 were determined to be feasible and reasonable. These noise barriers will be considered for construction. The final decision on construction of the noise barriers will be made during final design.	Caltrans Resident Engineer	During PS&E	No						
BIOLOGICAL ENVIRONMENT									
Natural Communities									
Project Feature									
No project features are required.									
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Wetlands and Other Waters									
Project Feature									
No project features are required.									
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Plant Species									
Project Feature									
No project features are required									
Avoidance, Minimization, and/or Mitigation Measures									
No measures are required.									
Animal Species									
Project Feature									
PF-BIO-1 **Avoidance of Breeding Season.** In order to avoid impacts to nesting birds, any native or exotic vegetation removal or tree-trimming activities will occur outside the nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season, a preconstruction survey will be conducted by a qualified biologist within three days of commencement of vegetation removal or the beginning of construction activities to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.	Caltrans Biologist	During PS&E and prior to construction	No						

Task and Brief Description	Responsible Branch, Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
Avoidance, Minimization, and/or Mitigation Measures									
BIO-2 **Avoidance of Overwintering Monarch Butterflies.** If an overwintering population is observed (November 1 through May 1), an Environmentally Sensitive Area (ESA) buffer will be delineated around the roost by a qualified biologist. If monarch butterflies are found at a roost site, construction shall not occur within the ESA buffer until the biologist has determined that the butterflies have left the area.	Caltrans Biologist	Prior to and during construction	No						
Invasive Species									
Project Feature									
PF-BIO-3 **Prevention of the Spread of Invasive Species.** During construction, the construction contractor shall inspect and clean construction equipment at the beginning of each day and prior to transporting equipment from one project location to another. Any plants removed or soil disturbed during the course of construction shall be contained and properly disposed of off site. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and implementation of Erosion-Control Best Management Practices (BMPs) will be free of invasive plant species seeds or propagules. No vegetation listed on the California Invasive Plant Council (Cal-IPC) inventory will be installed on the proposed project, and all plant palettes proposed for the project will be reviewed by a Qualified Biologist during the plans, specifications, and estimates (PS&E) phase. City tree planting and removal requirements will also be adhered to.	Caltrans Biologist	During construction	No						
Avoidance, Minimization, and/or Mitigation Measures									
No mitigation is required.									

Appendix E Abbreviations and Acronyms

AADT	annual average daily traffic
AAQS	ambient air quality standards
AB	Assembly Bill
ac	acre(s)
ACM	asbestos-containing materials
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
AEO 2013	*2013 Annual Energy Outlook* (United States Energy Information Administration)
APE	Area of Potential Effects
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ASE	National Institute for Automotive Service Excellence
BACT	Best Available Control Technology
Basin	South Coast Air Basin
BAU	business-as-usual
bgs	below ground surface
BMP	Best Management Practice
BNSF	BNSF Railway
BSA	Biological Study Area

CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
Census Bureau	United States Census Bureau
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol

City	City of Los Angeles
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Los Angeles
CO	carbon monoxide
CO Protocol	*Transportation Project-Level Carbon Monoxide Protocol* (Caltrans)
CO_2	carbon dioxide
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
COZEEP	Construction Zone Enhanced Enforcement Program
CTP	California Transportation Plan
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
dBA	A-weighted decibel(s)
DBH	diameter at breast height
Desk Guide	*Desk Guide, Environmental Justice in Transportation Planning and Investments* (Caltrans)
DHHS	Department of Health and Human Services
DSA	Disturbed Soil Area
DTSC	California Department of Toxic Substances Control
EA	Environmental Assessment

EB	eastbound
ED	Environmental Documentation
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	California Emission Factor Model
EO	Executive Order
EPACT92	Energy Policy Act of 1992
ESA	Environmentally Sensitive Area
EW	Existing Wall
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
ft	foot/feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
GIS	geographic information systems

Guidelines	Section 404 (b)(1) Guidelines (USEPA)
H_2S	hydrogen sulfide
HCM	*Highway Capacity Manual* (Caltrans)
HPSR	Historic Property Survey Report
I	Interstate
ICTF	Intermodal Container Transfer Facility
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
LACM	Natural History Museum of Los Angeles County
LADOT	Los Angeles Department of Transportation
LAFD	Los Angeles Fire Department
LAHD	City of Los Angeles Harbor Department
LA/LB Harbors	Los Angeles and Long Beach Harbors
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	lead-based paint
LCFS	low carbon fuel standard
LCP	local coastal program
LED	light-emitting diode
LEDPA	least environmentally damaging practicable alternative

LEHD	Longitudinal Employer-Household Dynamics (United States Census Bureau)
$L_{eq}(h)$	one-hour A-weighted equivalent continuous sound level
LGB	Long Beach Airport/Dougherty Field
L_{max}	maximum instantaneous noise level
LOS	level(s) of service
m	meter(s)
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
MEP	maximum extent practicable
mi	mile(s)
MLD	Most Likely Descendant
MOU	Memorandum of Understanding
mpg	mile(s) per gallon
mph	mile(s) per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MT	metric ton(s)
MT CO_2	metric ton(s) per year of carbon dioxide
MMT CO_2e	million metric ton(s) of carbon dioxide equivalent
MSAT	mobile-source air toxics

N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NB	northbound OR noise barrier
NBR	number of benefited receptors
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NOAA Fisheries Service	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NSR	Noise Study Report
O_3	ozone
OHWM	ordinary high water mark
OPR	Governor's Office of Planning and Research
OSTP	Office of Science and Technology Policy

PA	Programmatic Agreement
PA/ED	Project Approval/Environmental Documentation
PAC	Public Awareness Campaign
Pb	lead
PCBs	polychlorinated biphenyls
PDT	Project Development Team
PF	Project Feature
Pilot Program	Surface Transportation Project Delivery Pilot Program
PIR/PER	Paleontological Resources Identification and Evaluation Report
PL	property line
PM	Post Mile
	OR
	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
PMP	Paleontological Mitigation Plan
POAQC	project of air quality concern
POLA	Port of Los Angeles - the real property located in the Harbor District and San Pedro Bay owned and managed by the LAHD
POLB	Port of Long Beach
PortTAM	Port Area Travel Demand Model
ppm	parts per million

PS&E	Plans, Specifications, and Estimates
PR	Project Report
PRC	California Public Resources Code
PSR	Project Study Report
RAP	Relocation Assistance Program (Caltrans)
RCEM	Roadway Construction Emissions Model
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gas
ROW	right-of-way
RSA	Resource Study Area
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
Safeguarding California Plan	*Safeguarding California: Reducing Climate Risk* (California Natural Resources Agency)
SB	southbound
	OR
	Senate Bill
SBHP	South Bay Highway Program
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria (Caltrans)

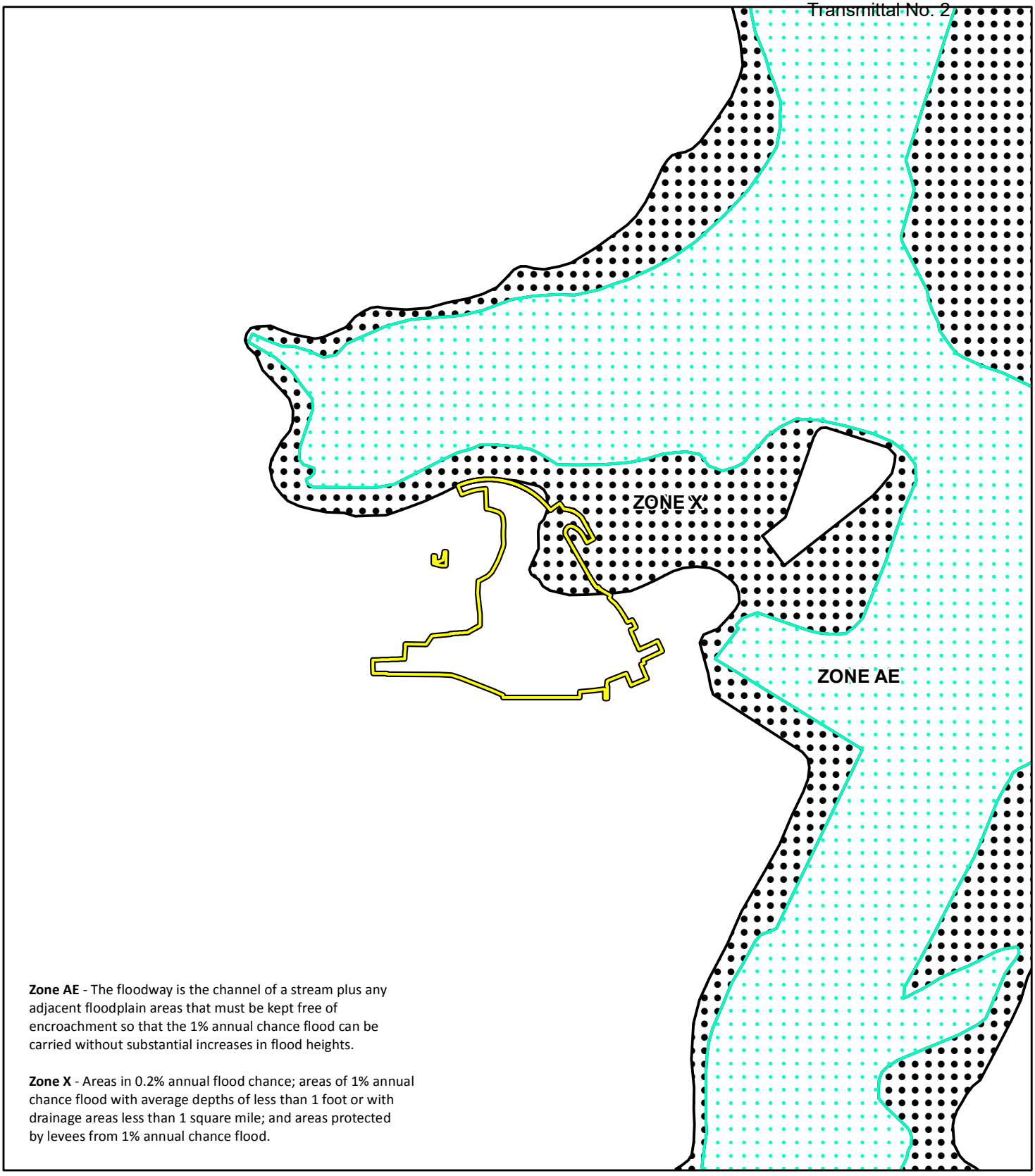
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLR	Sea-Level Rise
SLR Guidance	*State of California Sea-Level Rise Interim Guidance Document* (California Climate Action Team)
SO_2	sulfur dioxide
SR	State Route
SWIS	Solid Waste Information System (CalRecycle)
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	temporary construction easement
TCWG	Transportation Conformity Working Group
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TMC	Transportation Management Center (Caltrans)
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
Traffic Noise Analysis Protocol	*Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects* (Caltrans)
TSCA	Toxic Substances Control Act

TSM	Transportation Systems Management
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended
UP	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VHT	vehicle hours traveled
VIA Memorandum	Visual Impact Assessment Memorandum
VMT	vehicle miles traveled
VOC	volatile organic compound
WB	westbound
WBCT	West Basin Container Terminal
WDR	Waste Discharge Requirement
WPCP	Water Pollution Control Program

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Appendix F FEMA FIRM Maps

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Zone AE - The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

Zone X - Areas in 0.2% annual flood chance; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

LEGEND

Project Location

FEMA FIRM Flood Hazards

Zone AE

Zone X

N

0 500 1000

FEET

SOURCE: NAIP Imagery (2016); FEMA FIRM (2018)

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APPENDIX H

SR-47/ Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration

FEMA FIRM Flood Hazards

07-LA-47 PM 0.3/0.8

EA No. 07-31850

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Appendix H List of Technical Studies

The technical studies listed below were used in the preparation of this Initial Study/Environmental Assessment.

Addendum to the Initial Site Assessment (December 2018)
Prepared by AECOM

Addendum to the Natural Environment Study (Minimal Impacts) (May 2018)
Prepared by LSA

Air Quality Report (May 2018)
Prepared by LSA

Archaeological Survey Report (December 2018)
Prepared by LSA

Draft Traffic Study Report (January 2018)
Prepared by AECOM

Historic Property Survey Report (August 2018)
Prepared by LSA

Historical Resource Evaluation Report (July 2018)
Prepared by LSA

Initial Site Assessment (February 2017)
Prepared by AECOM

Natural Environment Study (Minimal Impacts) (March 2018)
Prepared by LSA

Noise Abatement Decision Report (December 2018)
Prepared by LSA

Noise Study Report (April 2018)
Prepared by LSA

Paleontological Identification Report and Paleontological Evaluation Report (February 2018)
Prepared by LSA

Draft Project Report (December 2018)
Prepared by AECOM

Project Study Report (March 2017)
Prepared by AECOM

Stormwater Data Report (December 2018)
Prepared by AECOM

Final Traffic Study Report for the State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration (March 2018)
Prepared by AECOM

Visual Impact Assessment Memorandum (May 2018)
Prepared by AECOM

Appendix I Responses to Comments

As required by the California Environmental Quality Act (CEQA) Guidelines Section 15087 and, a public notice of availability of the Draft Initial Study/ Environmental Assessment (IS/EA) for the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project IS/EA was published as a display ad in the *Los Angeles Times* (October 1, 2018)*, Press Telegram* (October 1, 2018), *Random Lengths News* (October 4, 2018), *Torrance Daily Breeze* (October 1, 2018), *Hoy* (October 5, 2018)*,* and *Metropolitan News* (October 1, 2018). The Draft IS/EA was circulated for public review for a period of 30 days, from October 1, 2018, to October 30, 2018. Copies of the Draft IS/EA were distributed to the State Clearinghouse, the Governor's Office of Planning and Research (15 copies of summary form), and other federal, State, and local agencies. Copies of the Draft IS/EA were available for public review at the California Department of Transportation (Caltrans) District 7 and the San Pedro Regional Library. A copy of the distribution list for the Draft IS/EA is provided in Chapter 6 of this ND/FONSI.

As outlined in the Federal Highway Administration (FHWA) Guidance for Preparing and Processing Environmental and Section 4(f) Documents, Technical Advisory T 6640.8A, Section H, following the public availability period, the EA should be revised or an attachment provided, as appropriate, to (1) reflect changes in the proposed action or mitigation measures resulting from comments received on the EA or at the public hearing (if one is held) and any impacts of the changes, (2) include any necessary findings, agreements, or determination (e.g., wetlands, Section 106, Section 4(f)) required for the proposal, and (3) include a copy of pertinent comments received on the EA and appropriate responses to the comments.

A total of four comment letters on the Draft IS/EA were received during the public review period. Comments were received from one federal agency, one State agency, and two private citizens. The comments also included one public comment that was recorded by a court reporter during the public hearing for the project held on October 17, 2018. Substantive comments that relate to environmental issues are thoroughly addressed. In some cases, corrections to the MND/FONSI are required or additional information is provided for clarification purposes. However, some of the comments do not present significant environmental issues or they request the incorporation of additional information in the MND/FONSI that is not relevant to environmental issues.

Such comments do not require a response, pursuant to Section 15088(a) of the CEQA Guidelines.

Section 15088 of the State CEQA Guidelines, Evaluation of and Responses to Comments, states:

a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft MND/FONSI and shall prepare a written response. The lead agency shall respond to comments received during the noted comment period and any extensions and may respond to late comments.

b) The lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report.

c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, major environmental issues raised when the lead agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail, giving the reasons that specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.

d) The Responses to Comments may take the form of a revision to the Draft MND/FONSI or may be a separate section in the final MND/FONSI. Where the Responses to Comments makes important changes in the information contained in the text of the Draft MND/FONSI, the lead agency should either:

    1. Revise the text in the body of the MND/FONSI; or
    2. Include marginal notes showing that the information is revised in the Responses to Comments.

No significant changes have been made to the information contained in the MND/FONSI as a result of the responses to comments, and no significant new information has been added. Therefore, this Responses to Comments appendix is

being prepared as a separate section of the MND/FONSI for consideration by Caltrans prior to consideration of the MND/FONSI for approval.

I.1 Index of Comments Received

Table I-1 provides an index of the list of the agencies, groups, and persons who commented on the Draft IS/EA prior to the close of the public comment period. The comments received have been organized in a manner that facilitates finding a particular comment or set of comments. Each comment has been organized into one of the following f categories: Federal Agencies, State Agencies, Comment Cards received during the public hearing, and Public Hearing Transcripts.

Table I-1 Comment Letters Received During Public Comment Period

Letter	Name	Date
F-1	United States Environmental Protection Agency	October 30, 2018
S-1	California Coastal Commission	November 21, 2018
C-1	Sharon Marshall	October 17, 2018
T-1	Peter Schroff	October 17, 2018

This division is the basis for the numbering of each comment. Each commenter has been assigned a numbered code. This numbered code is combined with sequential numbering for each comment. For example, Comment F-1-1 refers to the first comment in the letter from the United States Environmental Protection Agency (USEPA).

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I.2 Comments from Federal Agencies

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

October 30, 2018

Ron Kosinski, Deputy District Director
Division of Environmental Planning, Caltrans, District 7
100 South Main Street, Suite 100
Los Angeles, California 90012

Subject: Draft Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for the SR-47Nincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project, Los Angeles County, California

Dear Mr. Kosinski:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. EPA provides the following comments and recommendations to assist the California Department of Transportation (Caltrans) in determining whether a "Finding of No Significant Impact" will result at the completion of the Environmental Assessment (EA) process.

Air Quality

Environmental Justice

EPA supports the project's stated purpose to "improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community." The Draft EA states that the project would be constructed over an 18-month period beginning in 2021, and would result in temporary impacts to local roads due to ramp closures and traffic rerouting. The Environmental Justice section of the Draft EA notes that substantial percentages of low-income and minority populations reside in the study area, and that these communities would experience temporary construction-related air quality, noise, and traffic impacts; however, according to the Draft EA, several project features would minimize those impacts.

Recommendations: Given that the project would affect the flow of freight-related traffic from the adjacent Ports of LA and Long Beach, and that low-income and minority populations highly affected by the goods movement industry reside in the project area, we encourage Caltrans to devise a construction strategy that minimizes community impacts, consistent with the project's purpose and need. We recommend the following measures for consideration: F-1-1

- Avoid rerouting truck traffic within heavily burdened communities during the project's construction phase to the fullest extent feasible;
- Include the minimization of community impacts as an objective in the Transportation Management Plan (TMP); and
- Ensure that the Public Awareness Campaign (PAC) includes extensive public outreach to inform affected residents of any changes in truck traffic associated with the project.

Consideration of Other Reasonably Foreseeable Projects

The Draft EA notes that the project would assist in relieving congestion that would otherwise worsen F-1-2

with projected growth in the project area. It is unclear whether planned growth at the Ports of LA and Long Beach, such as the Everport Container Terminal Expansion Project and the Yang Ming Container Terminal Expansion Project, were considered in the project's impact analysis.

Recommendations:

- In the Final EA, clarify whether planned projects at the Ports of LA and Long Beach were considered in the impact analysis for this project. **If** such projects were excluded, revise the impact analysis to include them.
- Disclose whether this project's construction phase would overlap with construction of other planned port projects, and include necessary mitigation measures to reduce any additional construction-related impacts-.

F-1-2

Sensitive Receptors

Section 2.13.2.3 of the Draft EA states that most sensitive receptors in the project area are residences. This section does not provide information about the process that was used to identify sensitive receptors, and it does not indicate whether other sensitive receptors (e.g., schools, daycares, senior centers, health care facilities, etc.) would be affected by the project. According to data from the U.S. Geological Survey Geographic Names Information System[1] (GNIS) applied using the NEPAssist[2] tool, additional sensitive receptors, such as schools, appear to be located near the project area.

Recommendations:

- Conduct a thorough survey of sensitive receptors located in or near the project area, and describe this identification process in the Final EA.
- Disclose all identified sensitive receptors.
- Consider including a map that illustrates where each sensitive receptor is located in relation to the proposed project.
- Describe any measures that would be taken to minimize impacts to sensitive receptors. For example, consider locating construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners, and avoid rerouting truck traffic near sensitive receptors.

F-1-3

We appreciate the opportunity to review this Draft EA and are available to discuss our comments. Please send one electronic copy of the Final EA when it becomes available to this office at the address above (mail code ENF-4-2). **If** you have any questions, plea e contact Morgan Capilla, the lead reviewer for this project, at 415-972-3504 or capilla.morgan@epa.gov.

F-1-4

Sincerely,

Co . TeamSupervisor
Environmental Review Section

Electronic copy: Brenda Powell-Jones, Caltrans
Kelly Dunlap, Caltrans
Savannah Speerstra, Caltrans

[1] Available at: https://geonames.usgs.gov/domestic/
[2] Available at: https://www.epa.gov/nepa/nepassist

I.2.1 F-1 – United States Environmental Protection Agency (USEPA)

F-1-1

Thank you for your comment. As stated in Section 2.5.3.1, Project Feature PF-T-1 states that a Final Transportation Management Plan (TMP) will be developed in detail during final design. The detailed TMP will include detour routes and an extensive public outreach effort to inform the public of construction activities. Caltrans and the City of Los Angeles Harbor Department (LAHD) will make every effort to avoid heavily burdened communities when rerouting truck traffic during construction. Caltrans and LAHD will also avoid and/or minimize community impacts to the extent feasible during construction.

F-1-2

As stated in Section 2.5.3, traffic volume forecasts for Opening Year (2023) and Design Year (2045) No Build and Build conditions were developed by Cambridge Systematics using the Port Area Travel Demand Model (PortTAM). PortTAM is a detailed focus model of the Southern California Association of Governments' Regional Transportation Plan model. It includes the detailed container terminal truck and automobile trips and truck/automobile trips for all other cargo terminals and facilities within the Ports of Los Angeles and Long Beach (POLA/POLB) boundaries. The traffic model included all planned and/or proposed developments, including YML and Everport. Additionally, construction of the proposed project will not overlap with construction of any other area projects. Text has been added to Section 2.20 – Cumulative to clarify that there will be no overlap in construction activities with the proposed project.

F-1-3

The air quality analysis addresses and considers the closest sensitive receptors to the project which include residences, schools, and athletic facilities. Sensitive receptors are identified through a combination of input from project personnel familiar with the project area and a review of General Plan land use designations and aerial photos. Figure 3-1 in the Air Quality Report depicts the existing nearby land uses based on the General Plan land use designations. A map has been included (Figure 2.13-1) in Section 2.13 to illustrate where each sensitive receptor is located in relation to the proposed project. As stated in Section 2.13.3.1, with the implementation of standard construction measures (providing 50 percent effectiveness) such as frequent watering (e.g., a minimum of twice per day) as well as Project Features PF-AQ-1 through PF-AQ-5 and Measure AQ-6, fugitive dust and exhaust emissions from construction activities would not result in any adverse air quality impacts. This applies to all

receptors, including those that are sensitive. Also, as stated in Section 2.5.3.1, Project Feature PF-T-1 states that a Final Transportation Management Plan (TMP) will be developed in detail during final design. Construction staging and detour routes will be determined during final design and every effort will be made to avoid sensitive receptors.

F-1-4

As requested, when available, one electronic copy of the final environmental document will be provided to the email address provided.

I.3 Comments from State Agencies

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Transmittal No. 2

CALIFORNIA COASTAL COMMISSION
South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071

November 21, 2018

Ronald Kosinski, Deputy District Director
Caltrans District 7, Department of Environmental Planning
100 South Main Street, MS 16A
Los Angeles, CA 90012

RE: SR 47/Vincent Thomas Bridge and Front Street/Harbor Blvd. Interchange Reconfiguration Coastal Commission Staff Comments on Proposed ND/EA 31850 (SCH # 2018101003)

Mr. Kosinski:

Thank you for the invitation to comment on the proposed Negative Declaration/Environmental Assessment for the SR 47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration (Project). The project is within the Coastal Zone and constitutes development, so a coastal development permit (CDP) will be required following the CEQA review phase of the Project. The project bisects Port of Los Angeles and Coastal Commission jurisdictions. Most of the project appears to be outside the Port, within the San Pedro district of Los Angeles, which does not have a certified Local Coastal Program, so the Chapter 3 policies of the Coastal Act are the standard of review for a CDP. The San Pedro Land Use Plan may be used as guidance. The portion of the project within the Port is subject to review under the policies of the Port Master Plan. The Port may process a coastal development permit for the portion of project within its jurisdiction, which could be appealed to the Coastal Commission. Pursuant to Coastal Act Section 30715, the project is an appealable category of development: "roads or highways which are not principally for internal circulation within the port boundaries."

Note that Coastal Act Section 30601.3 authorizes the Coastal Commission to process a consolidated coastal development permit application when the applicant, the local government(s), and the Coastal Commission all agree to do so. As an alternative to separate coastal permits subject to different standards of review in multiple jurisdictions, the consolidated coastal permit is subject to review and approval only by the Coastal Commission; and the Coastal Act is the standard of review for the entire project, with any relevant certified Local Coastal Program, Land Use Plan or Port Master Plan providing guidance. Thus, Caltrans may either apply for separate CDPs from the Port and the Coastal Commission or secure a letter from the Port authorizing the Coastal Commission to process a consolidated CDP. As noted in Section 2.1.3 of the document, a Federal Consistency Certification is also required from the Coastal Commission, which may be processed prior to or concurrently with a CDP application. S-1-1

Some portions of the project appear to be outside Caltrans right-of-way. For portions of the project along City right-of-way, the City may join Caltrans as a co-applicant or may submit a separate coastal development permit application to the Coastal Commission. For portions of the project affecting property outside Caltrans and City rights-of-way, the property owner(s) may join as co-applicants or submit separate applications. While Caltrans has expressed its commitment to collaborate with the City on the project design and connection to the local transportation system, a separate coastal development

permit is not required to be approved by the City for development on its right-of-way; Caltrans may apply directly to the Coastal Commission pursuant to Coastal Act Section 30600(b)(2).
Please update Table 1.7: "Permits, Licenses, Agreements, and Certifications Needed" within the environmental document to identify the requirement for a coastal development permit from the Coastal Commission. Additionally, please update Section 2.1.3 within the document to remove references to the "San Pedro Local Coastal Program Specific Plan" which has not been certified by the Coastal Commission. Specific Plan policies may be referenced in other sections of the ND/EA, but are not a standard of review for a coastal development permit. S-1-1

Project Description
The project description includes "reconfigure the existing interchange at SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard (Figure 1-3). The proposed improvements would eliminate a bottleneck condition at the shared off-ramp terminus by creating a new, separate terminus for the westbound ramps." The purpose of the Project is to "improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange; and (2) improve goods movement and traffic circulation in the area in a manner that is sensitive to the needs of the local community."

Coastal Act Policies
One of the primary tenets of the Coastal Act is to preserve and enhance public access to and along the coast, which requires an interconnected and multi-modal transportation system. The Coastal Act also includes policies to preserve and enhance visual resources, biological resources, cultural resources, and water quality, which should inform the project design. A selection of Coastal Act policies is copied below; project alternatives should be analyzed for consistency with these policies:

Section 30210:
In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30230:
Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. S-1-2

Section 30231:
The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30244:
Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Section 30251:
The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

S-1-2

Section 30253:
New development shall do all of the following:
(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
(d) Minimize energy consumption and vehicle miles traveled.
(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Other Improvements
The environmental document (page 1-23) identifies "Other Improvements" including:

- Four storm water Best Management Practices (BMPs), three bioswales, and one detention device are proposed at locations within the interchange area.
- Five-foot-wide bike lanes along each side of Front Street and Harbor Boulevard within the project limits
- Six-foot-wide sidewalks along each side of Front Street and Harbor Boulevard from the Front Street/Harbor Boulevard and SR-47 ramps/Swinford Street intersection (i.e., the southern project limits) to the proposed westbound ramp intersection
- Americans with Disabilities Act (ADA) compliant curb ramps and crosswalks at all four legs of the proposed westbound ramp intersection and all but the south leg of the eastbound terminal intersection
- Updated bicycle and pedestrian facilities that would also tie into the Front Street Beautification, Pedestrian, Bicycle & Street Improvement Project, which is for a separate bike and pedestrian walkway along the east side of Front Street
- Improvements along Front Street/Harbor Boulevard, which would also include additional turn lanes at the ramp terminus intersection

California Coastal Trail

The proposed bicycle and pedestrian improvements are a crucial aspect of the project, which includes public right-of-way connecting to public amenities within the Port, and connecting the communities of San Pedro and Wilmington. The alignment also includes a likely segment of the California Coastal Trail. Specifically, the segment of Front Street east of SR 47 up to Pacific Avenue appears to lack sidewalks and bicycle lanes. Because of the cargo facility which restricts access seaward of Front Street in this area, a sidewalk and bicycle lane should be installed through the subject project as a component of the California Coastal Trail. Note that Assembly Bill No. 1396, approved by the Governor in 2007, requires transportation planning agencies such as Caltrans, whose jurisdiction includes property designated for the Coastal Trail, to coordinate with specified agencies regarding development of the trial. Because the street improvements proposed by the subject project are likely to be in place for 25-50 years, and the Vincent Thomas Bridge restricts pedestrian and bicycle access, now is the time to plan for safe pedestrian and bicycle access along Front Street. S-1-3

The project limits appear to extend around the baseball field to Pacific Avenue, but the environmental document and the project description should clarify that pedestrian and bicycle facilities will be connected to existing facilities on either side of the project limits. Additionally, the environmental document should analyze the potential for adjacent facilities which are currently substandard in width or inadequately buffered from vehicles traveling at a high rate of speed to be improved, consistent with the City's Vision Zero Initiative, Caltrans Complete Streets Program, the public access and recreation policies of the Coastal Act, and the public access and recreation policies of the San Pedro Land Use Plan. Are there existing or planned sidewalks, bicycle facilities, bus stops, or rest areas in the vicinity of the proposed improvements that could be enhanced? How can project alternatives be refined to enhance public access and recreation *for all the people*, not only for the people in personal vehicles?

Project Features

The environmental document (pages 1-24 through 1-29) identifies "Project Features" including standard measures to minimize damage to existing vegetation (PF-VIS-1), re-vegetate disturbed areas (PF-VIS-2), cease construction and bring in a qualified archaeologist if cultural resources are discovered (PF-CR-1), cease construction follow consultation requirements if Native American remains are discovered (PF-CR-2), implement pollution best management practices (PF-WQ-4), implement treatment BMPs (PF-WQ-5), apply new DTSC ADL Agreement soil reuse requirements (PF-HAZ-1), and remove trees outside of bird nesting season (PF-BIO-1). S-1-4

These features appear to satisfy Coastal Act policies related to marine resources, biological productivity, archaeological and paleontological resources. They should be incorporated into the project description when a coastal development permit application is submitted.

Sea Level Rise Adaptation

Finally, please update section 3.2.4.3 "Adaptation Strategies" within the environmental document to cite the most current guidance and the best available science. Please review the Coastal Commission's Sea Level Rise Policy Guidance and the best available science on sea level rise, which is provided in two reports – the Ocean Protection Council's April 2017 Rising Seas in California: An Update of Sea-Level Rise Science and its 2018 State Sea-Level Rise Guidance (the environmental document cites the OPC 2014 Guidance). The environmental document should include analysis of a low, medium, high, and extreme sea level rise scenario, in addition to effects of an extreme high tide and a 100 year storm. The S-1-5

referenced "worst-case 1.41-meter scenario by 2100" does not appear to be based on the best available science, does not appear to account for high tides and storm events – and may extend beyond the design life of the project. Please also analyze design treatments that may be included in the project to minimize hazards associated with sea level rise, as well as adaptation measures that may be implemented in the future if sea level rise is severe. S-1-5

Please note that the comments provided herein are preliminary in nature. More specific comments may be appropriate as the project develops. Coastal Commission staff requests notification of any future activity associated with this project or related projects. Thank you for the opportunity to comment on the proposed Negative Declaration/Environmental Assessment. You may contact me at 562-590-5071 with any questions. S-1-6

Sincerely,

ZBRehm

Zach Rehm
Senior Transportation Program Analyst

Cc: Savannah Speerstra, Environmental Planner, Caltrans District 7
Ana Dragin, Port Affairs Director, Los Angeles City Council District 15
Los Angeles Harbor Department via CEQAcomments@PortLA.org

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I.3.1 S-1 – California Coastal Commission

S-1-1

Thank you for your comment. The City of Los Angeles Harbor Department (LAHD), on behalf of Caltrans, will apply for a consolidated coastal development permit following the CEQA review phase of the project. Obtaining a coastal development permit has been added to Table 1.7, Permits, Licenses, Agreements, and Certifications Needed, of the final environmental document.

S-1-2

The Build Alternative was analyzed for consistency with various State, regional, and local policies and plans. The Build Alternative will not impact any recreational resources (see Section 2.1 Land Use), biological or marine resources (see Sections 2.15 through 2.19), archaeological or paleontological resources (see Sections 2.7 and 2.11), or visual resources (see Section 2.6). Additionally, Chapter 3 CEQA provides a discussion of CEQA significance thresholds and how the project may or may not impact the referenced resources.

S-1-3

Today, Harbor Boulevard / Front Street has bike lanes from south of the project limits, through the existing interchange, to the Knoll Hill Drive intersection. Included in the No-Build / Existing Conditions is the Front Street Beautification Project which is currently designed, funded, and anticipated for construction in 2019. The Beautification Project proposes a two-way Class I bike and pedestrian pathway along the north side of Front Street from beneath the Vincent Thomas Bridge extending north of the Pacific Avenue / Front Street intersection.

The SR-47 Harbor Avenue / Front Street Interchange Reconfiguration Project features an arterial cross-section that includes Class II bike lanes in both directions through the project limits. Intersection design within the project limits is consistent with the Caltrans Complete Streets Program. Intersection controls, signage, markings, and lighting provide safe passage for all users on the local streets.

Any improvements or addition of bicycle and pedestrian facilities outside of the project limits is beyond the purview and jurisdiction of Caltrans.

S-1-4

The Project Features referenced will be included in the project description when the LAHD applies for a coastal development permit.

S-1-5

The proposed project is located in a built-up area of Los Angeles County at the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, between PMs 0.3 and 0.8. The Front Street/Harbor Boulevard interchange is immediately adjacent to the west abutment of the Vincent Thomas Bridge. The Los Angeles/Long Beach Harbors Inner Harbor is approximately 0.3 mile east of the project site, and the Pacific Ocean is approximately 3.7 miles south of the project site. The ground surface surrounding the project area is approximately 25 to 45 feet (ft) in elevation.

The purpose of the proposed project is to improve safety, access, and the efficient operation of the SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard interchange, and to improve goods movement and traffic circulation in the area. The project involves reconfiguring the existing interchange, modifying ramps where needed to accommodate an additional general-purpose lane, and improvements to stormwater, bicycle, and pedestrian facilities.

The design life of the proposed project is approximately 40–50 years as a new interchange configuration. The projected time span used for analysis is the year 2080.

Referencing the OPC guidance on which Sea Level Rise (SLR) scenarios to consider, the RCP8.5 scenario for the year 2080, the following scenarios have been chosen for consideration of SLR impacts related to the proposed project: 2.2 ft (with a 5 percent probability of SLR meeting or exceeding), 4.3 ft (with a 0.5 percent probability of SLR meeting or exceeding) and the extreme H++ scenario (for visualization purposes only, as it is not tied to any emissions scenario) of 6.4 ft. A figure (Figure 3-4) has been added to Section 3.2.4.3, Adaptation Strategies, to show the abovementioned scenarios.

An analysis of potential SLR inundation was considered in the IS/ EA for the proposed project in September 2018 and considered a potential 1.41-meter (4.59-foot) increase in sea level for the 2100 projected year. With consideration of the latest science and recommendations, the proposed project is not in an area expected to be inundated by SLR.

S-1-6

California Coastal Commission staff will be notified regarding any future activity associated with the project or any related projects.

I.4 Comment Cards

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Caltrans

COMMENT SHEET

State Route 47 (SR-47)/Vincent Thomas Bridge & Front St./Harbor Blvd. Interchange Reconfiguration Project
Public Meeting
October 17, 2018
425 S. Palos Verdes Street
San Pedro, CA 90731

Thank you for your interest in the State Route 47 (SR-47)/Vincent Thomas Bridge & Front St./Harbor Blvd. Interchange Reconfiguration Project. Please provide your comments below.

PLEASE PRINT

Name Sharon Marshall **Phone** 4248320139

Address 811 N. Pacific - San Pedro - **Email** SharonKayBlack@yahoo

Comment: The dog park is very nice - I hope that it is relocated. - Thank you. C-1-1

Please return comment sheets during the Public Meeting, mail to the address on the back, or email to karl.price@dot.ca.gov. Comments are due by 5:00 pm, October 30, 2018.

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I.4.1 C-1 – Sharon Marshall

C-1-1

As stated in Section 2.1.1.4, the Knoll Hill Dog Park would be acquired as part of the proposed project. Since the dog park is located on LAHD property, any changes can be made at their discretion and the dog park is not required to be relocated. At this time, LAHD does not plan to relocate the dog park.

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I.5 Public Hearing Transcripts

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CERTIFIED COPY

IN RE THE MATTER OF THE PORT OF LOS ANGELES STATE ROUTE 47/VINCENT THOMAS BRIDGE & FRONT STREET HARBOR BOULEVARD INTERCHANGE.

Port of Los Angeles
State Route 47 /Vincent Thomas Bridge and
Front Street/Harbor Boulevard Interchange
Reconfiguration Project Information Meeting
Wednesday, October 17, 2018
San Pedro, California

SNYDER HEATHCOTE INC.

REPORTED BY Jamie L. Apodaca
CSR 10990

OUR FILE NO.

OFFICIAL COURT REPORTERS
3055 WILSHIRE BOULEVARD
SUITE 640
LOS ANGELES, CA 90010
TELEPHONE (213) 388-2151

IN RE THE MATTER OF THE PORT OF LOS ANGELES STATE ROUTE 47/VINCENT THOMAS BRIDGE & FRONT STREET HARBOR BOULEVARD INTERCHANGE.

Transcript of the Port of Los Angeles State Route 47/Vincent Thomas Bridge & Front Street/Harbor Boulevard Interchange Reconfiguration Project information meeting held at 6:33 P.M. on Wednesday, October 17, 2018, at 425 South Palos Verdes Street, Second Floor, San Pedro, California, before Jamie L. Apodaca, CSR #10990.

APPEARANCES:

Ron Kosinski, Caltrans Deputy District Director of Environmental Planning

Guillermo Martinez, Engineer, Port of Los Angeles

SAN PEDRO, CALIFORNIA; WEDNESDAY, OCTOBER 17, 2018

MR. KOSINSKI: Okay. We've got most of the crowd in their seats now. If we can get the rest of the individuals down here, then we can get started, and when we get done, we'll be able to go back and chat.

Okay. We are going to call this meeting to order.

Good evening, ladies and gentlemen. We're here to talk about the Route 47 interchange location here at Harbor Boulevard. It's a document -- environmental document that's currently in circulation.

And the meeting today is going to be following the outline that you just saw, basically which is we had the open house part now where you interact with the staff. Then we're going to have a presentation. I'm going to do introductions, and presentations by Guillermo primarily. And then we're going to open it up to any public comments that you have.

And then once we're done with that section, we're going to go -- close the public hearing part, and we'll go back to the boards, and you can talk with the specialists we have and have them answer any questions you have.

The purpose of today's meeting is to look at the details of this project. The participants are the members of Caltrans; my staff -- I and my staff as well as the Port of Los Angeles. We are collaborating on this between the two

agencies and the intent being that we hear from the public, get whatever information it is that you can provide of importance to us and to you, of course; and then make some modifications to the project and make sure that we have the best product out there as possible.

I'd like to point out that there's not going to be any decisions made until after we have this public hearing; after we have the comments, all the comments that come in.

And we've sent over 200 notices to the people living adjacent to the project area. We've also sent all the notices to the state, federal, and local agencies as well as elected officials. So we're expecting them to also provide us some good information.

So there are some handouts you may have got today. I don't know. But there are handouts and information here that you can -- that you can look at and take home.

And we have a court reporter here. That's another thing is we have a court reporter here, and I promised her that everybody would talk very slowly so that she can get a very accurate transcript.

The -- I got the notices.

Okay. The environmental document is -- we have copies of it here that you can look through. We have information covering the project -- engineering maps. So there's quite a bit of information here that is

particularly -- should be very helpful to everybody who is here today.

With that, I'm going to move forward with introducing Guillermo Martinez, who is the project engineer here, and he has all of the specifics on this project that are important to you.

So, Guillermo, take it away.

MR. MARTINEZ: Thank you.

Good evening, everyone. My name is Guillermo Martinez. I'm a senior transportation engineer at the Port of L.A. I'm going to be presenting on behalf of Sarah Aziz (phonetic), who is the project manager. She's in training up in Northern California. So I'll be covering this for today.

Just to get everybody allocated with the project, the project is located right here (indicating). So just to give you an idea where that is, this is the Vincent Thomas Bridge, this is the 110, this is the S.R. 47 starting, and we're somewhere right here currently (indicating).

This is a closeup of the project that we're proposing to design and construct, and we'll be evaluating the environmental document, and that is the 47 Project, to call it S.R. 47 for short.

And I'll move into the project objectives, what we are proposing and how we're proposing to fix some of those deficiencies in the project.

So currently, existing conditions, there's a vary of issues all over the area. First there's access issues on Front Street, mostly with getting traffic safely in operating through this area. You have a very short deceleration rate when you're coming westbound off the Vincent Thomas Bridge onto Harbor Boulevard here (indicating).

You also have a very short acceleration lane as you're getting on the S.R. 47 towards the Vincent Thomas Bridge going in the eastbound direction, which causes a lot of slow merging.

And then as the eastbound ramp lands on Harbor Boulevard and the traffic from the 110 comes this way and meets at the same location, you have a big meeting issue which causes a lot of operational and safety problems. We're proposing to fix all these issues with this project and the backup that this meeting causes on the freeway.

Some things that will remain that we're not addressing as part of this project are weaving issues on this section of the westbound S.R. 47 and the eastbound portion of it here. It's outside of our project scope, which is right about here (indicating).

So what are we proposing to remove? As I mentioned, we're going to remove the access issues. We're going to improve those. We're going to improve the slow merging. We're going to fix the slow weaving here (indicating). We're

also going to fix the backup on the freeway.

In doing so, we're going to remove the eastbound ramp that goes this way currently (indicating) and the existing location of the onramp to the 110 going westbound. We're going to relocate those to the north, and I'll get into that in the next slide.

So this is the proposed project. So here are some of the key items that we are proposing to design and construct.

First we'll be widening Front Street to improve operations and safety along north- and southbound Front Street. We will eliminate this ramp that merges here (indicating). We're going to flip it north of the V.T.B. so traffic now coming eastbound -- westbound -- sorry -- now lands and goes this way and lands here. We're going to flip that to the north side, and it's going to create a bigger intersection at Knoll and Front Street.

So we'll make some signal improvements. We're going to widen the intersection. In doing so, we're going to take the onramp, the existing onramp that's located here, and we're going to also shift it to this location to ensure that the on- and offramps are in the same place headed westbound. This will fix a couple of things.

We're also going to take that opportunity to improve the intersection of Harbor and Swinford, and we're going to

add a second lane to the offramp going eastbound towards Harbor Boulevard.

Some of the things that will be -- that will be required as part of this project are shown on this slide. First is we're going to flip the direction of the Knoll Hill Drive road going up to Knoll Hill. Currently you can make a turn here -- sorry. You come in this way, you go up the hill, and then you exit at Knoll Hill.

In order to make these improvements, we're going to have to flip the direction of this one-way roadway. So it will enter on this side now and then go the opposite direction and exit over by Pacific.

We're also going to have to shift that a couple hundred feet away from the intersection to meet Caltrans standards, design standards. We're going to realign -- we're going to take the opportunity of us removing the offramp that's located right here.

Currently there's a really short weave merging distance when you're coming onto the V.T.B. this way. We're going to push this portion of the loop back to double the distance that gives you to center it to get on the V.T.B. to give you a safer merge onto the Vincent Thomas Bridge, and that's at 47.

In addition, we are looking at adding some sound walls up on top of the hill here, here, here, and I believe

there's one up on top of Knoll Hill on the property up here.

And "Cost and Schedule": Project total cost estimate is about 31 million. This includes planning, design, and construction of the project. Total construction cost is about 23 million at the moment. Environmental document is currently out for review, and comments are due at the end of this month.

We plan to complete this design in the fall of 2020 and construction in spring of 2023.

And with that, I'll hand it back over to Ron.

MR. KOSINSKI: Well, we're moving along nicely and quickly, aren't we?

Okay. Now it's our opportunity to hear from you, and if you have a comment, I would like you to come to the speaker's location here and make a comment.

And does anybody want to speak?

Well, then that's going to make this meeting a lot quicker.

Okay. Please keep in mind that you have until October 30th to provide any comments. What happens a lot of times is you go through and look at the information and go home. You're thinking about it, and a week later, all of a sudden there's something that comes to mind. So you have until the 30th to provide any kind of comments that you can think of to provide to us that would help us in this

decision-making process.

It's important that we get everything possible from the community that's important to them. We also have a -- at this point in time, we have a survey going out to those people dealing with the sound walls. If you see any of those people, tell them, "Don't forget to get those surveys in," or if you've got one of them, we certainly would like to hear what your opinion is regarding the surveys.

In closing, I just have to say that this is your community, and really the issues that we should be looking at are the issues that are important to you and your community. So that's why we've come here today to hear from you, and we'd like to have that continued dialogue up until the 30th of October, and that will help us in our decision-making process.

So with that, if there are no speakers that would like to come up --

You would like to come up and speak? Well, then, you have an opportunity to speak right now, sir.

MR. SCHROFF: Well, I have --

MR. KOSINSKI: Your name? Would you give us your name, please.

MR. SCHROFF: I'm sorry?

MR. KOSINSKI: Name?

MR. SCHROFF: Oh, name is Peter Schroff, and I am the ↓ T-1-1

proud owner of a Knoll Hill house, which is going to be somewhat affected by this thing. I paid an arm and a leg for the place a little over a year ago and was a little bit surprised to see this main entrance for the Harbor freeway and 73 within a block of my house. So the option that I have is to have a sound wall put up and my concern that I don't want it to be like a prison. T-1-1

So I came here to see exactly what's going on and why they're building this freeway. I travel on this -- back and forth on the 73 all the time, and I get off on this -- off the Vincent Thomas Bridge, and I never had any problem with the traffic flow where it is. T-1-2

But now I have -- with this proposed plan, we're going to have the exit and the entrance for the Harbor freeway right at my doorstep, practically. So I have a big concern here.

MR. KOSINSKI: Okay.

MR. SCHROFF: And, you know, to spend $31 million for an on- and offramp that functions well at the moment, I don't know -- is there planned for a lot more traffic when the Port of Call goes in or what this is specifically -- I don't understand why we're spending $31 million to move this thing. T-1-3

MR. KOSINSKI: Okay.

MR. SCHROFF: And they told me it was flow of traffic. The people coming off the Thomas Vincent Bridge and coming T-1-4

off the -- I don't know what comes off -- the Harbor freeway or something? And people wanted to change lanes and make a right turn and left turn onto Harbor Drive? So you can see my concern here. T-1-4

MR. KOSINSKI: Sure; sure. What I would encourage you to do is to take a look at the environmental document, especially the chapter that --

MR. SCHROFF: I'm sorry?

MR. KOSINSKI: Take a look at the environmental document, especially the section that talks about the purpose and need of the project. It gives an indication of why the agencies believe that there is a need for these improvements. Now, I'm not going to try to articulate what they are because it's a whole chapter of the document. So take a look at that, and maybe it'll help you. But we understand what your position is and thank you.

MR. SCHROFF: What I am supposed to -- I'm not sure what you're saying what am I -- what should I take a look at?

MR. KOSINSKI: Take a look at the chapter in the environmental document on the purpose and need of the project. There's a chapter that says, "Here's why we are proposing to build this project," and that hopefully would answer some of these questions.

MR. SCHROFF: And which document is that?

MR. KOSINSKI: It's the one sitting up there in the --

MR. SCHROFF: In back?

MR. KOSINSKI: Yeah.

MR. SCHROFF: So I didn't receive it in the mail?

MR. KOSINSKI: Right. No. That's a notice on this, but we have the environmental document --

MR. SCHROFF: Okay. I'll take a peek at it.

MR. KOSINSKI: -- too. Okay?

MR. SCHROFF: Okay. That's my -- all right. I've expressed my concern.

MR. KOSINSKI: You did. Thank you. We appreciate it too. I hate to have these hearings that nobody speaks.

Okay. Anybody else?

MR. SCHROFF: I'm glad to be the one.

MR. KOSINSKI: Anybody else would like to speak on any topic dealing with this project?

All right. Then with that, we are again to the point where we're going to close the hearing. And, again, do really appreciate you taking the time and putting the effort in to try to give us some help on how to make sure this is a project that you can live with.

With that, we're closing the hearing, and thank you very much. We're going to then break into our open-house session where you can go back and talk to the engineers and talk to our environmental staff. They can show you where that information is on the purpose and need of the project,

and we'll be here as long as you need us. But we're obviously going to be going home sometime. Thank you so much.

(The meeting was adjourned at 6:49 P.M.)

STATE OF)
) SS.
CALIFORNIA)

I, Jamie L. Apodaca, Certified Shorthand Reporter in and for the State of California, do hereby certify:

That the above hearing was taken down by me in stenographic form and thereafter reduced to computerized transcription.

I further certify the foregoing hearing is a full, true, and correct transcript of my stenographic notes and that dismantling, unsealing, or unbinding of this transcript will render this certificate null and void.

I further certify that I am neither counsel for nor related to nor employed by any of the parties in said action; and furthermore that I am not a relative or employee of any attorney or counsel employed by the parties hereto or in anywise interested in the outcome thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this 23rd day of October, 2018.

Jamie L. Apodaca
CSR No. 10990

I.5.1 T-1 – Peter Schroff

T-1-1

Noise abatement in the form of a noise barrier was proposed at the commenter's location. However, the commenter expressed concern about the standard masonry block wall and requested landscaping in the form of a hedge be provided. The commenter responded with a "no" vote regarding the proposed noise barrier.

T-1-2

A detailed traffic analysis was performed for this project and, as shown in Chapter 1, Section 1.2.2, the project is needed due to operational issues caused by westbound SR-47 traffic and southbound I-110 traffic exiting to a shared terminus at Harbor Boulevard. Please refer to Section 1.2.2 for more detail regarding the need for the project.

T-1-3

Please refer to Response to Comment T-1-2.

T-1-4

Please refer to Response to Comment T-1-2.