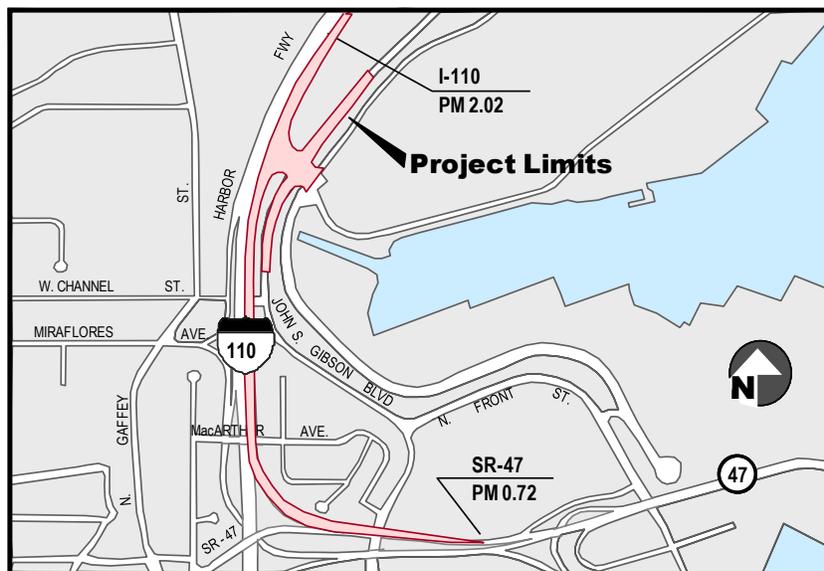


John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – SR 47/I-110, PM SR 47, 0.00 to 0.72 and I-110 0.92 to 2.02
EA 260600; Project # 0700000489

Initial Study/Environmental Assessment



Prepared by
City of Los Angeles Harbor Department
and
State of California Department of Transportation

The environmental review, consultation, and any 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 U.S.C. 327.



June 2011

**John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector
Improvements Project
in the City of Los Angeles, County of Los Angeles**

DISTRICT 7 – LA – SR 47/I-110, PM SR 47, 0.00 to 0.72 and I-110 0.92 to 2.02

INITIAL STUDY/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S.C. 4332(2)(C)

The environmental review, consultation, and any 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 U.S.C. 327.

CITY OF LOS ANGELES HARBOR DEPARTMENT
and
THE STATE OF CALIFORNIA
Department of Transportation

June 17, 2011

Date of Approval



Christopher Cannon
Director, Environmental Management Division
City of Los Angeles Harbor Department

June 17, 2011

Date of Approval



Ronald Kosinski
Deputy District Director
District 07 – Los Angeles
California Department of Transportation

PROPOSED MITIGATED 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 improve the northbound (NB) Interstate 110 (I-110) ramps at John S. Gibson Boulevard (West Channel Street interchange) and the NB I-110 and southbound (SB) State Route (SR) 47/NB I-110 Connector. The proposed work includes widening the SR 47/I-110 connector from 1 to 2 lanes, extending the additional through lane on the northbound I-110 past the John S. Gibson Boulevard off-ramp, modifying the northbound ramps at the I-110/John S. Gibson Boulevard interchange, and improving the intersection of John S. Gibson Boulevard and the NB I-110 ramps.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the intent of Caltrans as a Lead Agency, and the LAHD as a Responsible Agency, to individually adopt an MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on farmlands/timberlands, mineral resources, growth, and Section 4(f) resources.
- The proposed project would have no significant effect on land use, community character and cohesion, environmental justice, hydrology and floodplains, geology/soils/seismicity, and air quality.
- With mitigation measures incorporated, the proposed project would have no significant effect on the following resources: community disruption, property acquisition, utilities and public services, traffic and transportation, visual resources, cultural resources, paleontological resources, hazardous materials, noise, and biological resources.

Christopher Cannon
Director, Environmental Management Division
City of Los Angeles Harbor Department

Date

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

Date

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
Proposed Finding of No Significant Impact**

for

Interstate 110 and State Route 47

John S. Gibson Boulevard/Interstate 110 Access Ramps and State Route 47/Interstate 110
Connector Improvements

Post Miles 0.92/2.02 on Interstate 110

Post Miles 0/0.72 on State Route 47

in Los Angeles County, California

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, 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 appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment and incorporated technical reports.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumptions of responsibility pursuant to 23 U.S.C. 327.

Date

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

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Chapter 1

Proposed Project

Chapter 1 Proposed Project

1.1 Introduction

The Los Angeles Harbor Department (LAHD), in cooperation with the California Department of Transportation (Caltrans) District 7, proposes to improve the northbound (NB) Interstate 110 (I-110) ramps at John S. Gibson Boulevard (West Channel Street interchange), the NB I-110, and southbound (SB) State Route (SR) 47 to NB I-110 Connector. The project limits along the freeway extend from SB SR 47 approximately 0.3-mile east of the Pacific Avenue Overcrossing (Post Mile [PM] 0.72) to I-110 approximately 0.7-mile north of the Channel Street Overhead (PM 2.02). The proposed work includes widening the SR 47/I-110 connector from one to two lanes, extending the additional through lane on the NB I-110 past the John S. Gibson Boulevard off-ramp, modifying the NB ramps at the I-110/John S. Gibson Boulevard interchange, and improving the intersection of John S. Gibson Boulevard and the NB I-110 ramps. The project would also include improvements to the existing drainage system and widening of the Pacific Avenue Undercrossing at SR 47 and the Channel Street Overhead at I-110. In addition, a series of soundwalls to abate traffic noise within the project area would be constructed as part of the proposed project. Figures 1-1 and 1-2 show project location and vicinity maps.

The project is included in the Fiscal Year (FY) 2008 Federal Statewide Transportation Improvement Program (STIP). The cost is estimated at \$31.0 million, which includes \$30.4 million for construction and \$0.6 million for right-of-way (ROW) and utility relocation. The project will be funded by the LAHD and by the STIP.

1.2 Purpose and Need

1.2.1 Purpose of the Project

The purpose of the proposed project is to:

- Improve access for trucks to the NB I-110 freeway using the John S. Gibson Boulevard on- and off-ramps
- Improve safety for traffic traveling from SB SR 47 connecting to NB I-110
- Reduce existing and forecasted traffic congestion

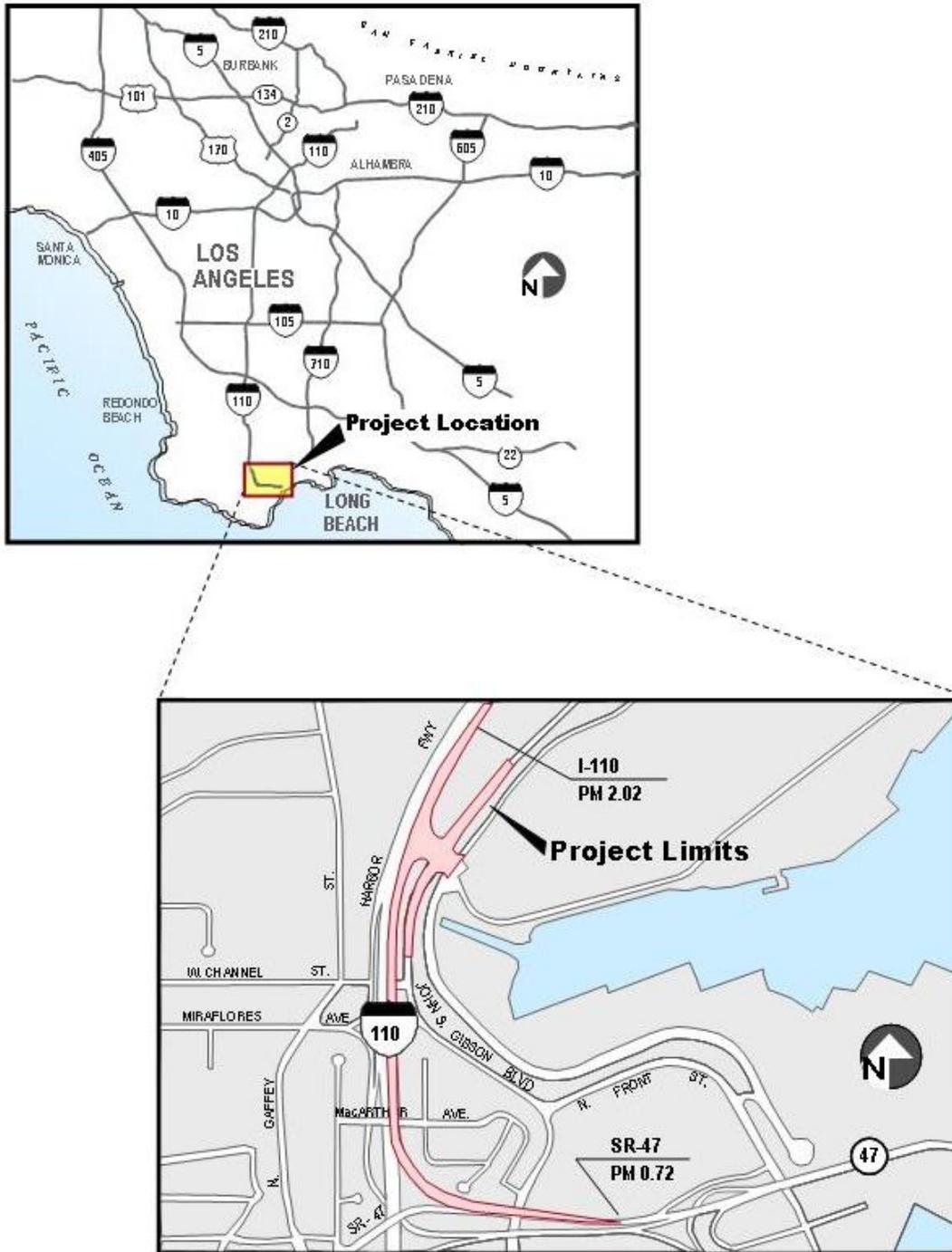


Figure 1-1 Project Location Map



Figure 1-2 Vicinity Map

1.2.2 Need for the Project

The traffic volume for the SB SR 47 to NB I-110 Connector is expected to increase and exceed the current limit for a single-lane connector. As a result, the SB SR 47 mainline will experience backup unless an additional lane is added to accommodate the expected demand. Currently, traffic from the on-ramp at Front Street enters SB SR 47 at a relatively slow speed compared to the traffic on SR 47 heading SB from the Vincent Thomas Bridge. The weaving distance between the merge point of the on-ramp and the split point of the NB I-110 and SB SR 47 freeways is relatively short, approximately 720 feet in length. This short weaving distance, combined with the high weaving traffic volumes, creates an operational deficiency because the fast-moving SB mainline traffic must reduce speed drastically to weave with the slow-moving traffic from the on-ramp to access the connector to NB I-110. With the expected traffic demand in the future, this operational deficiency is expected to worsen without operational improvements.

1.2.2.1 Problems, Deficiencies, and Justification

The traffic demand for the southbound SR 47 to northbound I-110 connector is expected to increase and exceed the current limit for a single-lane connector. The existing 2009 connector traffic volume is approximately 1,300 vehicles per hour (vph) during both the AM and PM peak periods. This volume is expected to reach approximately 2,300 vph in 2035. As a result, the southbound SR 47 mainline will experience significant backup unless an additional lane is provided to accommodate the increased demand. Caltrans HDM Index 504.4 recommends a multilane branch connection when the design year volume exceeds 1,500 vph.

Furthermore, the on-ramp traffic at Front Street enters southbound SR 47 at a slower speed than the SR 47 southbound mainline traffic within a distance of approximately 720 feet. This short weaving distance, combined with the high volume of weaving traffic, creates an operational deficiency because the fast-moving southbound mainline traffic must reduce speed dramatically to weave with the slow-moving traffic from the on-ramp to access the connector to northbound I-110. This operational deficiency is expected to worsen without any operational improvements with the growing traffic.

In addition, the Port plans to enhance the use of the Gibson Gate by making it the main entrance and exit point to the Yang Ming and China Shipping terminals from the I-110 Freeway. The Knoll Gate, located further south, will remain; however, it will only allow traffic to exit the terminal for cargo heading east on SR 47.

In conclusion, the interchange at John S. Gibson Boulevard must be modified to accommodate the expected traffic demand and to make it more conducive for trucks.

1.2.2.2 Regional and System Planning

Federal and State Systems

The proposed project on I-110 is part of the Interstate system, a sub-system of the National Highway System (NHS).

State Planning

The 1991 Transportation Concept Report (TCR) indicates a year 2010 concept facility of eight mixed flow (MF) lanes based on plans identified in the Southern California Association of Government (SCAG)'s Regional Transportation Plan (RTP), Metro's Long Range Plan and the Caltrans' District Management Plan.

Regional Planning

The 2008 RTP and subsequent amendments included plans for Port access improvements including short-term initiatives to improve access to Terminal Island and removing bottlenecks to truck movements. The proposed project is identified as one of these plans. The 2008 Multi-County Goods Movement Plan (MCGMP) also recommends funding over \$100 million for goods movement projects in Los Angeles County between 2007 and 2012 through the 2007 Call for Projects.

The proposed project is identified in the 2008 Regional Transportation Improvement Program (RTIP), under Los Angeles County Local Highways, Page 70 of 83, project ID # LA0D390.

Therefore the proposed project is consistent with the above Regional Planning programs.

Local Planning

The proposed project is consistent with the San Pedro Community Plan, which designates John S. Gibson Boulevard as a major highway and calls for a Class I bike path along John S. Gibson Boulevard. The proposed project is also consistent with the City of Los Angeles General Plan adopted on August 8, 2001.

Transit Operator Planning

John S. Gibson Boulevard is currently a Los Angeles Metropolitan Transit Authority (Metro) bus route as part of Metro's Express Service between San Pedro and Downtown Los Angeles. The proposed improvements on John S. Gibson Boulevard will not impact bus operations. There are no bus stops within the project limits.

Metro Harbor Subdivision has planned a transit corridor project in this area. Within the project limits, this transit corridor travels between John S. Gibson Boulevard and northbound I-110, and it crosses over both the on- and off-ramps. This project is in the conceptual planning stage.

1.2.2.3 Traffic

An approved Traffic Operations Analysis Report (Traffic Study) dated December 2, 2009 was prepared for this project. The findings are summarized in this section.

Tables 1-1 and 1-2 show the existing (Year 2009) traffic and future (Year 2035) projected traffic conditions, respectively. The figures indicate significant traffic growth, especially truck traffic heading north from the John S. Gibson Boulevard on-ramp.

Tables 1-2 and 1-3 compare the level of service (LOS) on the freeway segments and ramps for the year 2035 between no-build and build conditions. The data indicate that the LOS will be improved at both the off- and on-ramps with the proposed project.

Similarly, Table 1-4 provides the LOS on the local facility. The data indicate that although the LOS will remain the same at the intersection of John S Gibson Boulevard and I-110 northbound ramps, the build alternative will reduce delay at the intersection operation.

The data tend support of the build alternative as an effective mitigation measure to alleviate traffic operations in the project area over the no-build alternative.

**Table 1-1
Existing Volume/LOS – Year 2009**

Location	AM Peak Hour			PM Peak Hour		
	Volume	Trucks (%)	LOS	Volume	Trucks (%)	LOS
Southbound SR 47 between Front Street on-ramp and Connector (weaving area)	1,978	14	B	2,430	13	C
Northbound I-110 between Connector and John S. Gibson Blvd off-ramp (weaving area)	3,605	5	C	2,552	9	B
Northbound Off-Ramp from I-110 at John S. Gibson Blvd	63	53	C	44	75	B
Northbound I-110 at John S. Gibson Blvd	3,542	5	C	2,508	8	B
Northbound On-Ramp to I-110 from John S. Gibson Blvd	1,001	2	B	480	9	A
Northbound I-110, north of on-ramp at John S. Gibson Blvd	4,544	4	C	2,989	8	B

Source: Traffic Analysis Report, Iteris, 2009

**Table 1-2
Future Volume/LOS – Year 2035 No-Build Alternative**

Location	AM Peak Hour			PM Peak Hour		
	Volume	Trucks (%)	LOS	Volume	Trucks (%)	LOS
Southbound SR 47 between Front Street on-ramp and Connector (weaving area)	3,252	17	D	3,612	12	E
Northbound I-110 between Connector and John S. Gibson Blvd off-ramp (weaving area)	3,811	11	D	3,728	10	D
Northbound Off-Ramp from I-110 at John S. Gibson Blvd	137	47	D	290	26	D
Northbound I-110 at John S. Gibson Blvd	3,674	10	C	3,438	9	C
Northbound On-Ramp to I-110 from John S. Gibson Blvd	1,943	14	E	1,677	16	D
Northbound I-110, north of on-ramp at John S. Gibson Blvd	5,617	11	C	5,115	11	C

Source: Traffic Analysis Report, Iteris, 2009

**Table 1-3
Future Volume/LOS – Year 2035 Build Alternative**

Location	AM Peak Hour			PM Peak Hour		
	Volume	Trucks (%)	LOS	Volume	Trucks (%)	LOS
Southbound SR 47 between Front Street on-ramp and Connector (weaving area)	3,252	17	C	3,612	12	C
Northbound I-110 between Connector and John S. Gibson Blvd off-ramp (weaving area)	3,811	11	C	3,728	10	C
Northbound Off-Ramp from I-110 at John S. Gibson Blvd	137	47	B	290	26	B
Northbound I-110 at John S. Gibson Blvd	3,674	10	C	3,438	9	C
Northbound On-Ramp to I-110 from John S. Gibson Blvd	1,943	14	D	1,677	16	D
Northbound I-110, north of on-ramp at John S. Gibson Blvd	5,617	11	C	5,115	11	C

Source: Traffic Analysis Report, Iteris, 2009

**Table 1-4
Intersection LOS for Year 2009 and Year 2035**

Intersection	No-Build				Build with Proposed Improvements			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Existing, Year 2009 John S. Gibson Blvd / I-110 northbound ramps	B	20.2	B	16.7	—	—	—	—
Future, Year 2035 John S. Gibson Blvd / I-110 northbound ramps	D	52.4	D	49.5	D	46.3	D	40.8

Source: Traffic Analysis Report, Iteris, 2009

1.2.2.4 Accident History and Analysis

The accident data obtained from Caltrans Traffic Accident Surveillance and Analysis System (TASAS) Table B, for the 3-year period from June 1, 2005, to May 31, 2008, are summarized in Table 1-5.

**Table 1-5
Accident Rates for NB I-110 Mainline and Ramps at John S. Gibson Boulevard
(within Project Limits)**

Route Segment	Actual Accident Rates ³ (percent)			Average Accident Rates ³ (percent)		
	Fatalities	Injuries & Fatalities	Total	Fatalities	Injuries & Fatalities	Total
NB I-110 Mainline ¹	0.00	0.86	2.08	0.010	0.36	1.00
SR 47 Mainline ²	0.00	0.44	1.06	0.010	0.41	1.09
SB SR 47 on-ramp at Front Street/ Harbor Boulevard ¹	0.00	0.12	0.49	0.002	0.26	0.75
SB SR 47 Connector to NB I-110 ¹	0.00	0.06	0.06	0.005	0.15	0.45
NB I-110 on-ramp from John S. Gibson Boulevard ¹	0.00	0.65	1.63	0.002	0.16	0.55
NB I-110 off-ramp to John S. Gibson Boulevard ¹	0.00	0.00	6.42	0.004	0.28	0.95

Source: TASAS Table B Caltrans District 7. For SB SR 47, data includes PM 0.0 to 1.0.

Notes:

¹ Period: June 1, 2005 – May 31, 2008

² Period: April 1, 2005 – March 31, 2008

³ Accident rate listed in Per Million Vehicles (for ramps) or Per Million Vehicle Miles (for mainline)

Source: Traffic Analysis Report, Iteris, 2009.

The accident rates on NB I-110 within the project limits are twice as much as the statewide average. Based on these data, 44 percent of the collisions were categorized as hitting an object, 22 percent involved rear-end collisions, and 16 percent were sideswipes. This segment of freeway consists of short spacing between the interchanges, short spacing between freeway guide signs, a sag vertical curve superimposed on horizontal curve, and nonstandard weaving distance between the SB SR 47/NB I-110 connector and John S. Gibson Boulevard ramps.

The accident rates for the NB off-ramp at John S. Gibson Boulevard are six times higher than the average rate for similar facilities statewide. According to TASAS data, four accidents occurred within the studied period, with two occurring in the intersection of John S. Gibson Boulevard and one each occurring at the ramp exit and on the ramp. Of these four accidents, two struck light or signal poles, one struck the dike or curb, and one struck another vehicle.

The accident rates for the NB on-ramp at John S. Gibson Boulevard are three times higher than the average rate for similar facilities statewide. According to TASAS data, 15 accidents occurred on the ramp within the studied period. Of these 15 accidents, 4 were sideswipe collisions, 4 were rear-end collisions, 3 were broadsides, and 2 were hitting objects. Of the 15 accidents, 3 occurred at the ramp entrance, 5 occurred in the intersection of John S. Gibson Boulevard, and 7 occurred on the ramp.

1.2.2.5 Weaving Analysis

There are two locations within the project limits where weaving movements have an important impact on the traffic fluency. Weaving can be described as where a traffic movement exiting the freeway has to merge with a conflicting traffic movement entering the freeway from an upstream on-ramp over a given distance. The first weaving section occurs on SB SR 47, from the Harbor Boulevard on-ramp to the NB I-110 Connector. The second weaving section occurs on NB I-110, from the SR 47 Connector to the John S. Gibson Boulevard off-ramp. Tables 1-6 and 1-7 present the input and results of the weaving analyses of these two locations for the exiting roadway geometry.

For the weaving section on SR 47, the current LOS is B (AM) and C (PM), but in 2035 the LOS is projected to drop to D (AM) and E (PM). This section has two other shortcomings: (1) short merge distance, and (2) significant difference in speed between the fast-moving traffic from SB SR 47 with the slow-moving on-ramp traffic at Front Street. For the weaving section on NB I-110, the current LOS is C (AM) and B (PM), but in 2035 the LOS is projected to drop to D (AM) and D (PM).

**Table 1-6
Summary of Input Data for Weaving Analysis (Existing Geometry)**

Item	SB SR 47 between Harbor Boulevard On-Ramp and Connector to NB I-110	NB I-110 between Connector from SB SR 47 and John S. Gibson Boulevard Off-Ramp
Weaving Type	A ¹	B ²
Number of Lanes in Weaving Area	3	3
Weaving Segment Length	720 feet	1,390 feet
Estimated Free-Flow Speed	50 mph	65 mph
Terrain	+3 percent Grade	Level
¹ Weaving Type A = weaving vehicles in both directions must make one lane change to successfully complete a weaving maneuver. ² Weaving Type B = Weaving vehicles in one direction may complete a weaving maneuver without making a lane change, whereas other vehicles in the weaving segment must make one lane change to successfully complete a weaving maneuver. mph = miles per hour		

Source: Traffic Analysis Report, Iteris, 2009.

**Table 1-7
Existing Geometry in the Vicinity of I-110 and SR 47**

Weaving Segment	Design Year	AM Peak Hour			PM Peak Hour			Average Speed (mph)	
		Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
SB SR 47 Weaving between Harbor Boulevard on-ramp and I-110 Connector	2009	1,978	17.2	B	2,430	21.5	C	45	40
	No Build 2014	3,054	33.9	D	2,599	23.9	C	35	40
	No Build 2035	3,252	30.1	D	3,612	36.2	E	40	35
NB I-110 Weaving Segment between SR 47 Connector and John S. Gibson Boulevard off-ramp	2009	3,605	25.4	C	2,552	18.2	B	50	50
	No Build 2014	3,609	30.6	C	2,835	21.3	B	45	50
	No Build 2035	3,811	33.2	D	3,728	32.9	D	45	40
PCE = Passenger car equivalent pc/mi/ln = Passenger cars per mile per lane mph = miles per hour									

Source: Traffic Analysis Report, Iteris, 2009.

1.3 Project Description

1.3.1 Existing Facilities

The SR 47 mainline from Front Street/Harbor Boulevard to the I-110 mainline at John S. Gibson Boulevard is a critical link between the SB traffic on SR 47 and NB traffic on I-110 through the West Basin area. The Front Street/Harbor Boulevard on-ramp is a two-lane on-ramp to SB SR 47. The two lanes merge into one 12-foot-wide lane before entering the SB SR 47 mainline, at which point it becomes an auxiliary lane until it becomes a one-lane connector from SB SR 47 to NB I-110. The existing connector provides one 14-foot-wide lane with a 10-foot-wide right shoulder. The remaining two lanes from the SR 47 mainline extend past the connector and terminate approximately 0.3-mile farther at Gaffey Street.

The NB I-110 begins in San Pedro and diverges from the existing Gaffey Street near O'Farrell Street. I-110 remains a two-lane freeway until it merges with the SR 47/I-110 Connector. At the termination of the SR 47/I-110 Connector, I-110 becomes a three-lane freeway in the NB direction and crosses over Channel Street. On the Channel Street Overhead, I-110 includes a NB off-ramp at John S. Gibson Boulevard; this is also known as the West Channel Street off-ramp. Proceeding north past the John S. Gibson Boulevard/West Channel Street off-ramp, I-110 continues in a three-lane configuration. All lanes on the freeway are 12 feet in width with a 10-foot-wide left shoulder and an 8- to 10-foot-wide right shoulder.

The NB I-110 off- and on-ramps at John S. Gibson Boulevard terminate directly opposite the Port's terminal gate, which is known as the Gibson Gate. The existing NB on-ramp consists of two-lane ramps that are metered for traffic flow, 12 feet in width, before merging into a single lane at the freeway entrance. No shoulder is provided for the two-lane portion of the ramp, and an 8-foot-wide right shoulder is provided for the one-lane portion of the ramp. This ramp joins the existing three-lane NB I-110 freeway to become a four-lane freeway. The four-lane configuration continues as it proceeds NB to the next interchange at C Street.

In between John S. Gibson Boulevard and the Gibson Gate, one freight railroad track runs parallel to the street in the north and south directions. During field observations, it was noted that freight rail traffic was present during peak daytime hours, with freight cars commonly blocking the entry and exit from the Gibson Gate.

John S. Gibson Boulevard provides two lanes in the NB and SB directions. There are two left-turn lanes for the NB I-110 on-ramp and one left-turn pocket in the SB direction to the Port's Gibson Gate. Striped bike lanes (i.e., shoulders) and sidewalks exist on each side of the street.

A Pacific Harbor Line Railroad track, which is owned by the LAHD, traverses underneath the Channel Street Overhead. This line runs parallel with John S. Gibson Boulevard on the east side of I-110 and parallel with Gaffey Street on the west side of I-110. The area underneath the Channel Street Overhead and east of the railroad track is owned by the City of Los Angeles, is vacant, and has been used for parking; however, over the past several years, a group of skateboarders have informally gathered and used the area to create a skate facility without a permit from the City of Los Angeles or Caltrans. At public scoping meetings for the proposed project, many residents and local skateboarders expressed their support for the skate facility, and comments were made regarding the positive impact it has had on the neighboring San Pedro community. This group of skateboarders also gained the support of local government officials, including Los Angeles City Councilwoman Janice Hahn.

1.3.2 Project Alternatives

This section describes the proposed action and the design alternatives that were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts.

1.3.2.1 No Build Alternative

Under this alternative, freeway and local roadway improvements associated with the proposed action would not be constructed. There would be no change to existing conditions at the John S. Gibson Boulevard/I-110 access ramps and SR 47/I-110 Connector. This approach is inconsistent with Caltrans' goal of providing an efficient interregional mobility system and with the purpose and need for the project. There would be no cost associated with this alternative.

1.3.2.2 Build Alternative

The Build Alternative has been developed to improve access for trucks to the NB I-110 freeway using the John S. Gibson Boulevard on- and off-ramps, improve safety for traffic traveling from SB SR 47 connecting to NB I-110, and reduce existing and forecasted traffic congestion

1.3.3 Design Features

The following paragraphs describe engineering features of the proposed components under the Build Alternative, as illustrated in Figure 1-3.

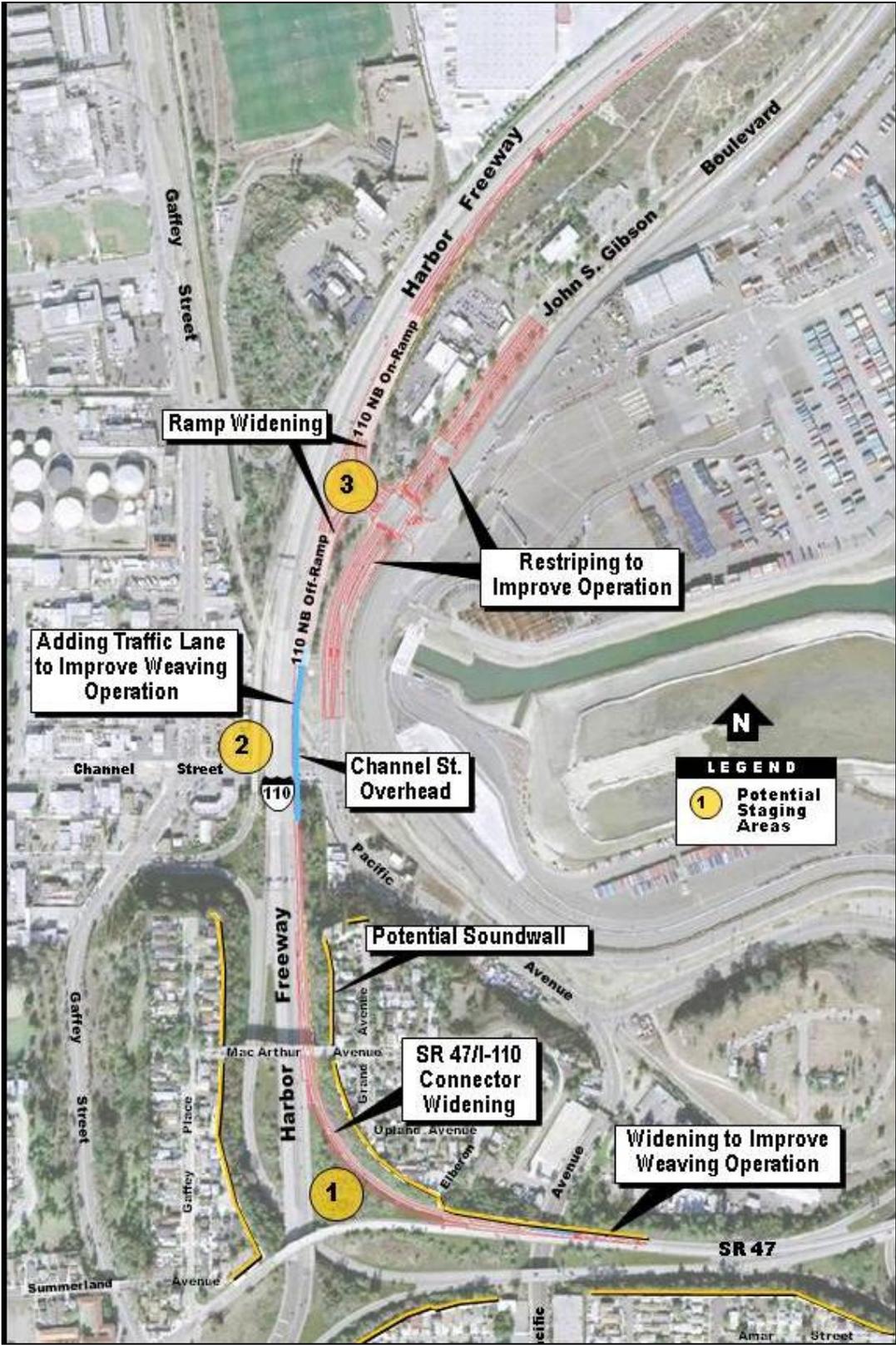


Figure 1-3 Design Features of the Proposed Improvements

1. **SB SR 47/NB I-110 Connector Widening:** The SR 47/I-110 Connector would be widened from one lane to two lanes to increase the capacity of the connector. It would also improve the weaving operation on SB SR 47 between the Front Street on-ramp and the SB SR 47/NB I-110 Connector. Once the two-lane connector joins NB I-110, a third through lane would be added to NB I-110 to improve its weaving operations. The widening would include adding a single 12-foot-wide traffic lane to the existing SR 47/I-110 Connector between 180 feet west of the Front Street/SR 47 on-ramp and NB I-110/John S. Gibson Boulevard off-ramp. At the Pacific Avenue Undercrossing, the widening would range from 9 feet to 11 feet north of the existing edge of deck. As the connector separates from SR 47 and continues north to join I-110, it would be slightly realigned to the west side of the traveled way for an approximate distance of 15 feet.
2. **NB I-110 Widening:** A through lane would be added between the connector and West Channel Street interchange NB off-ramp at John S. Gibson Boulevard to improve the weaving operation on NB I-110 between the SB SR 47/NB I-110 Connector and NB off-ramp at John S. Gibson Boulevard. The widening along NB I-110 is between 3 feet and 14 feet. Along this section, the Channel Street Overhead (bridge structure) would be widened by approximately 14 feet. This five-span, two-abutment bridge structure would require construction of four columns to support the widened segment of the structure, each at approximately 4 feet to 6 feet in diameter. One of the columns would be located at or near the existing Pacific Harbor Line Railroad track, which is owned by the LAHD, requiring realignment of the track. The railroad realignment would occur entirely outside of John S. Gibson Boulevard and would be contained within the existing railroad ROW.
3. **NB I-110 at John S. Gibson Boulevard On- and Off-Ramp Improvements:** The NB I-110 on- and off-ramp at John S. Gibson Boulevard would be widened with Caltrans standard shoulders. The on-ramp would be lengthened and realigned to the east for an improved vertical alignment, resulting in a new edge of pavement ranging from 12 feet to 42 feet east of the existing ramp. The current on-ramp at the entrance gore has a stopping sight distance (SSD) of 350 feet, which is for a design speed of less than 45 miles per hour (mph). The proposed ramp geometry would improve the design speed to 50 mph to comply with Caltrans' current design standards. The profile grade would also be improved from 5.8 percent to 5.5 percent to better accommodate truck traffic.
4. **John S. Gibson Boulevard Improvements:** John S. Gibson Boulevard and the NB I-110 ramps would be restriped to provide longer left-turn lanes. The signal system would be upgraded. A new 5-foot-wide concrete sidewalk would be provided for the SB direction south of the

intersection up to the Channel Street intersection. A bike lane would be striped for the NB direction between this intersection and the Channel Street intersection.

5. In addition to the improvements described above, seven masonry soundwalls up to 14 feet high would be constructed within the Caltrans' ROW along the property line of the residences located adjacent to the SR 47/I-110 Connector to abate projected future traffic noise from the freeway. Caltrans and LAHD staff have kept the area residents informed about the proposed soundwalls and have provided each affected property owner an opportunity to vote for or against the proposed soundwalls. The location of the final soundwalls is shown in Figure 1-4.

The proposed action is an improvement to the existing roadway facilities; besides the Build and No Build Alternatives, no other alternatives were considered for traffic improvement in this area. Because the purpose of the project is to improve safety and traffic operation by geometric changes to the roadways, Transportation Systems Management (TSM) and Transportation Demand Management (TDM) Alternatives would not fulfill the purpose and need of the project; therefore, they do not apply.

The proposed project demonstrates independent utility and logical termini. Independent utility means the project must be able to function on its own without further construction of an adjoining segment. Logical termini for project development considerations are generally defined as: 1. rational end points for a transportation improvement; and 2. rational end points for a review of the environmental impacts associated with a proposed improvement. The objective of the project is to improve traffic operation along the John S. Gibson Boulevard/I-110 Access Ramps and SR-47/I-110 Connector. This project has independent utility because it would not require further construction of an adjoining segment. Furthermore, it has definite project limits with adequate length to address all the environmental impacts associated with the project.

1.3.4 Unique Features

As mentioned in Section 1.3.1 – Existing Facilities, the area underneath the Channel Street Overhead is being used by a group of skateboarders from the neighborhood for skateboarding activities (referred to as Channel Street Skate Facility). While the proposed project is not approving the use of the area for a skate facility, its use is being considered “official” as part of the environmental analysis. Since 2003, several skating structures have been built, and skateboarders are using the facility at their own risk. Although this skate facility has no official permit from the City of Los Angeles or Caltrans, some community members identify it as a neighborhood recreation facility. The proposed construction of the Channel Street Overhead

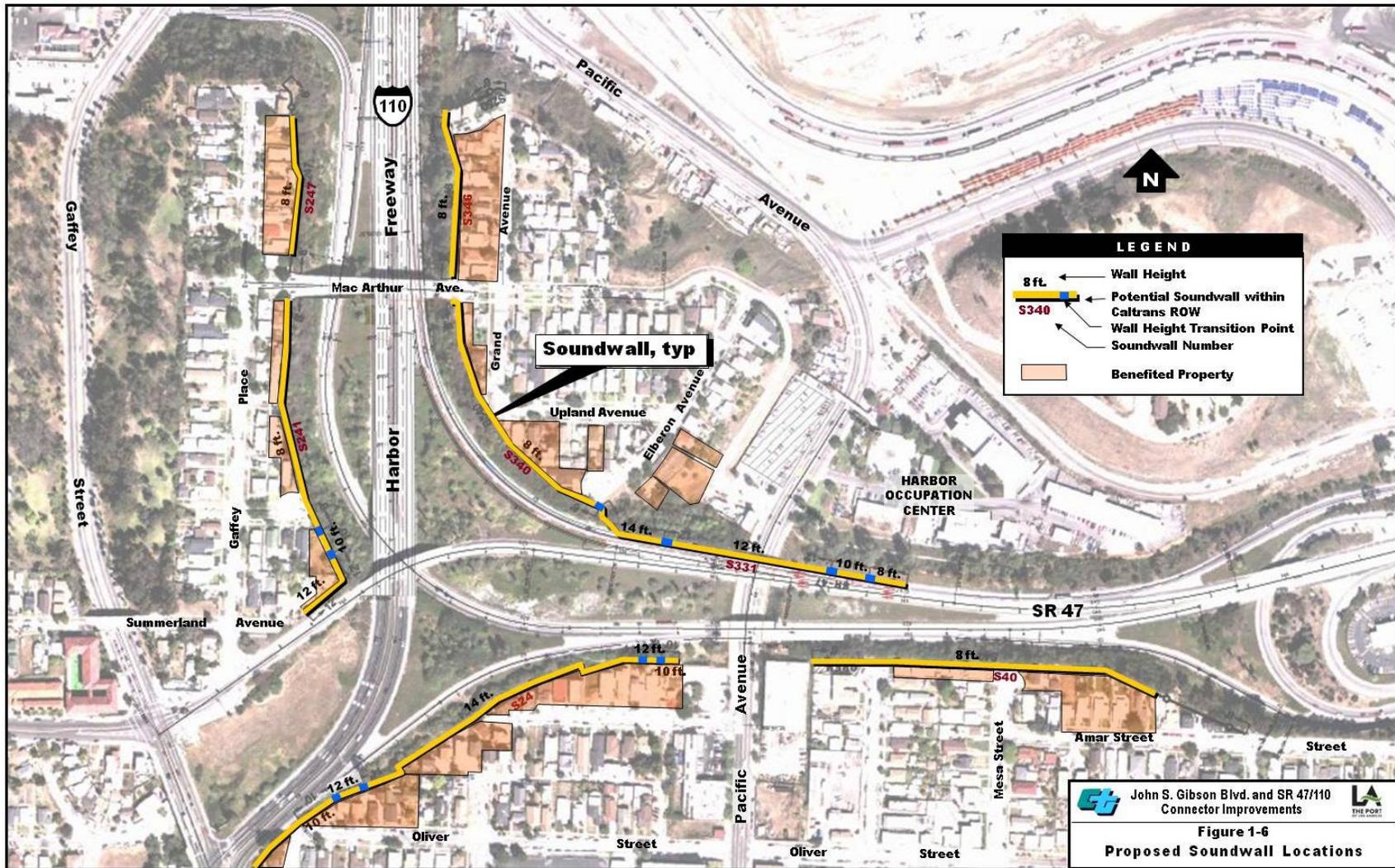


Figure 1-4 Proposed Soundwall Locations

widening would require construction of new columns to support the widened structure. Based on the preliminary engineering design, one of the new columns would be located at or very close to the skate facility. The current bridge widening design involves a support column located just north of the skate facility and within the Pacific Harbor Line Railroad ROW. The location of the proposed column requires realignment of the railroad tracks for a horizontal distance of approximately 10 feet and a longitudinal distance of approximately 500 feet. The railroad tracks are owned by the LAHD. The Pacific Harbor Line owns and operates the equipment on the tracks.

1.3.5 Design Standards

Construction within City of Los Angeles ROW on John S. Gibson Boulevard would be designed to City of Los Angeles Design Standards. Construction within Caltrans ROW would be designed according to the Caltrans Highway Design Manual, except for the nonstandard design features documented by the Caltrans-approved Design Exception Fact Sheets.

1.3.6 Right-of-Way

Most of the improvements for the project are within Caltrans' ROW. The ROW required for this project lies within the City of Los Angeles. Construction of the soundwalls along the property line of the first-row residences within the project area would require temporary construction easements (TCEs).

An aerial easement would be acquired from the LAHD to widen the Channel Street Overhead crossing the railroad track. A footing easement would also be acquired from Caltrans for maintenance purposes during post construction.

In total, ROW requirements for the project include a partial acquisition of one publicly owned property and a TCE from 60 parcels.

1.3.7 Proposed Staging Area

A staging area is an area where the contractor can store equipment and materials needed for the project. Potential locations for construction staging areas within the project area are shown in Figure 1-5. The first staging area is a triangular-shaped parcel located southwest of the SR 47/I-110 Connector. The second staging area is a triangular-shaped parcel located underneath the Channel Street Overhead. The last staging area is located just west of the NB I-110/John S. Gibson Boulevard off-ramp and on-ramp.

The precise location for the final staging area(s) would be identified by the construction contractor, working in collaboration with the LAHD.

1.3.8 Estimated Cost

Table 1-8 summarizes a preliminary cost estimate for the proposed Build Alternative. The LAHD will fund 100 percent of the Project Approval/Environmental Document (PA/ED) phase support cost for this project.

**Table 1-8
Build Alternative Cost Estimate**

Description	Total, \$million	
	Within Caltrans' Right-of-way	Within City Right-of-way
Roadway	24.5	1.8
Structure	4.1	0.0
Right-of-Way	0.6	0.0
Total	29.2	1.8

1.3.9 Construction Schedule and Staging

An approximate 2.5-year construction period is scheduled to commence in September 2011 and be complete by January 2014. Construction would be conducted in phases to minimize traffic congestion within the project area and its vicinity, as briefly described below.

Phase 1: Construction of NB I-110/SR 47 Connector Detour and John S. Gibson Boulevard/NB I-110 On-Ramp

This phase of construction would be divided into two stages, as described in the following paragraphs.

Stage 1a: This stage would last approximately 4 months (with the first month for mobilization) and would include the following activities:

- Construction of a temporary detour to the western/southern edge of the existing SR 47/I-110 Connector
- Construction of a retaining wall along the John S. Gibson Boulevard/NB I-110 on-ramp in preparation for the ramp widening construction

Stage 1b: This stage of construction would last approximately 1 month and would include construction of the John S. Gibson Boulevard/NB I-110 on-ramp widening. During this period, the ramp would be closed, and traffic would be diverted to the C Street/NB I-110 on-ramp (approximately 1.25 miles north of the project site).

Phase 2: Construction of I-110/SR 47 Connector, Pacific Avenue Undercrossing Widening, and Channel Street Overhead Widening

This phase of construction would last approximately 13 months and would include the following activities:

- Diversion of traffic from the existing SR 47/I-110 Connector to the SR 47/I-110 temporary detour route
- Construction of the SR 47/I-110 Connector realignment
- Construction of the Pacific Avenue Undercrossing widening
- Construction of the Channel Street Overhead widening
- Construction of the NB I-110 auxiliary lane from the SR 47 Connector to the NB I-110/John S. Gibson Boulevard off-ramp
- Construction of soundwalls

Phase 3: Construction of I-110/SR 47 Connector, Pacific Avenue Undercrossing Widening, and Channel Street Overhead Widening

This phase of construction would be divided into two stages, as described in the following paragraphs.

Stage 3a: This stage of construction would last approximately 6 months and would include construction of the John S. Gibson Boulevard/NB I-110 off-ramp. Construction of the soundwalls would continue.

Stage 3b: This phase of construction would last approximately 4 months and would include construction of the SB John S. Gibson Boulevard sidewalk. Construction of the soundwalls would continue.

1.4 Final Decision Making Process

After completion of the Draft Project Report and the draft environmental document (this IS/EA), Caltrans, in cooperation with the Department of the Harbor, will circulate the IS/EA for public review and comment. Caltrans and the Port plan to conduct a public hearing to provide the project information to the general public and interested parties and to accept public comments concerning the project and its potential environmental impacts. Caltrans and the Port will review and respond to all comments received during the public review period and consider them in its deliberations prior to deciding whether to move forward with the proposed Build Alternative. Subsequent to the Port's concurrence with the final environmental document, Caltrans will prepare the Final IS/EA and Mitigated Negative Declaration (MND) pursuant to CEQA

requirements and issues its Finding of No Significant Impact (FONSI) pursuant to NEQA requirements, prior to approving the project.

1.5 Alternatives Considered but Eliminated from Further Discussion

As part of the Channel Street Overhead widening, three additional alternatives were considered but eliminated from further consideration, as discussed below.

1.5.1 Channel Street Overhead Alternative 2

This alternative would have included a new 5-foot-diameter vertical column to support the widened freeway. The column would have impacted the skate facility and would have been located in the middle of the skate facility within a flat area between two skate bowls. The flat area between the concrete bowls is approximately 11 feet wide. If this alternative had been selected, the flat area between the bowls would have been reduced to approximately 3 feet on either side of the column to the edge of the adjacent bowls. This may or may not have been an acceptable width for the skateboarders. It should be noted that the skate facility has been constructed around an existing vertical support for the existing overhead structure. The existing vertical support comes down to the bottom of the half pipe and is more invasive to the skate facility than the proposed column for this alternative. This alternative, which would cost approximately \$2.1 million more than the Build Alternative, has been removed from consideration due to the column location within the skate facility and because the column would not be in alignment with the existing supports. Caltrans' preference, due to structural considerations, is to have the new column align with the existing overhead supports.

1.5.2 Channel Street Overhead Alternative 3

This alternative included an "Outrigger," where the vertical support would have been located east of the railroad tracks and tied to the widened freeway section by a horizontal bent extending over the railroad tracks and skate facility. Compared to the Build Alternative and the Channel Street Overhead Alternative 2, this alternative would result in minimal impacts to the skate facility. This alternative was eliminated due to the substantially higher construction cost of \$2.5 million more than the Build Alternative and the additional railroad permitting requirements for the bent extension over the tracks.

1.5.3 Channel Street Overhead Alternative 4

This alternative was requested by Caltrans' Structures Division with the goal of preparing an alternative that would match the column locations with the existing structure. This alternative would have included a vertical column located within one of the skate bowls, rendering it useless. The alternative would have avoided encroachment into railroad ROW as planned in the Build Alternative. Like Alternative 2, this alternative was eliminated due to impacts to the skate facility. The approximate cost of this structural alternative was estimated to be \$2.2 million more than the Build Alternative.

1.6 Permits and Approvals Needed

Prior to commencement of the construction activities, the following permits or approvals will be required:

Agency	Permit/Approval
Regional Water Quality Control Board (RWQCB)	National Pollutant Discharge Elimination System (NPDES) Permit
RWQCB	Groundwater Dewatering Permit for discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Los Angeles
Federal Highway Administration (FHWA)	Air Quality Conformity Determination
Los Angeles Harbor Commission	Coastal Permit for construction within the Coastal Zone Area
Public Utilities Commission (PUC)	Railroad realignment permit, B permit
Ports of Los Angeles and Long Beach	Railroad License/Agreement for work within railroad ROW
City of Los Angeles	Grading and construction permits

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Chapter 2
Affected Environment,
Environmental Consequences,
and Mitigation Measures

Chapter 2 Affected Environment, Environmental Consequences, and Mitigation Measures

2.1 Introduction

The proposed project by Caltrans, in cooperation with LAHD, is subject to state and federal environmental review requirements. Project documentation has been prepared in compliance with 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 action required in accordance with NEPA and other applicable federal laws for this project is being carried out by Caltrans under its assumption of responsibility pursuant to 23 *United States Code* (U.S.C.) 327. Caltrans is the lead agency under NEPA and CEQA for the proposed project.

Analysis of each environmental factor in this Initial Study/Environmental Assessment (IS/EA) includes discussion of the affected environment; environmental consequences, including construction impacts, permanent impacts, cumulative impacts, and secondary impacts; and avoidance, minimization, and compensation measures for each project alternative. When the impacts were found to be potentially significant, as determined under CEQA, then mitigation measures were developed to reduce the impacts to a less than significant level. CEQA requires that each significant effect on the environment resulting from the project be identified and, to the extent feasible, mitigated.

Under CEQA, thresholds are used to determine if project-related changes to the environment are significant (CEQA Guidelines Section 15064.7). Per NEPA regulations (40 *Code of Federal Regulations* [CFR] 1508.27), significance is based on context and intensity. The magnitude of the impact is evaluated, and no judgment of its significance is made in the document. Usage of the term "significance" in this document is made pursuant to CEQA only, and the evaluation of environmental factors pursuant to CEQA significance thresholds is presented in Appendix A, CEQA Checklist. Under NEPA, all impacts are discussed regardless of the threshold amount, and they include mitigation measures where reasonable. Each section in Chapter 2 discusses the context and intensity of environmental impacts and mitigation measures, as required by NEPA.

In analyzing cumulative and secondary effects of the proposed project, the Council on Environmental Quality (CEQ) handbook entitled *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ, 1997) and the FHWA position paper entitled *Secondary*

and Cumulative Impact Assessment in the Highway Project Development Process (FHWA, 1992) were followed. Three major steps, which are parallel with the environmental impact assessment process, were used in analyzing cumulative effects. These consist of (1) scoping, (2) defining the affected environment, and (3) determining the environmental consequences.

2.1.1 Technical Studies

Environmental analyses presented in this chapter are primarily based on a series of technical studies prepared for the John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project. These studies consist of the following:

- Air Quality Technical Report (Parsons, June 2010, updated March 2011)
- Archaeological Survey Report (Ecorp, October 2009)
- Supplemental Archaeological Survey Report (Ecorp, January 2010)
- Archaeological Evaluation Report (Ecorp, August 2010)
- Extended Phase I Report (Ecorp, October 2009)
- Supplemental Extended Phase I Report (Ecorp, March 2010)
- Historic Property Survey Report (Ecorp, October 2009; Revised October 2010)
- Historical Resources Evaluation Report (Parsons, October 2009)
- Finding of Adverse Effect (Ecorp, December 2010)
- Supplemental Initial Site Assessment (Group Delta, Inc., January 2009)
- Phase II Site Investigation Report (Group Delta, Inc., November 2009)
- Supplemental Phase II Site Investigation Report (Group Delta, Inc., March 2011)
- Natural Environment Study (Parsons, May 2009)
- Memorandum of Biological Survey Results to Supplement Natural Environment Study (Parsons, December 2009)
- Noise Study Report (Parsons, March 2010)
- Addendum to Noise Study Report (Parsons, July 2010)
- Noise Abatement Decision Report (Parsons, April 2010; Revised September 2010)
- Noise Technical Memorandum (Parsons, April 2011)
- Storm Water Data Report (Parsons, September 2010)
- Traffic Analysis Report (Iteris, December 2009)
- Resources Evaluated Relative to Section 4(f) (Parsons, April 2011)

The above technical studies are incorporated by reference and are available for review at the LAHD and Caltrans District 7 office.

2.1.2 Resources Considered but Determined to not be Relevant

The following environmental resources were considered but determined to not be relevant due to their absence from the project area. Consequently, there is no further discussion regarding these resources in this document.

Farmland/Timberland. The project site is located in a highly developed, urban area of Los Angeles with no farmland or agricultural resources within the project area and vicinity.

Mineral Resources. The proposed action is located in a highly urbanized area of the City of Los Angeles, San Pedro community. The State Department of Conservation does not designate the project site as a Significant Mineral Aggregate Resources Area; thus, no impacts resulting from the loss of mineral resources are anticipated.

Growth. Growth within the project area and vicinity is controlled by the City of Los Angeles General Plan. The main purpose of the project is to improve traffic operation and to enhance safety. The Traffic Analysis Report (Iteris, 2009) that was prepared and approved by Caltrans shows no change in traffic volumes under the build and no-build scenarios. The Traffic Analysis Report also shows no increase in traffic demand for the project area as a result of project implementation. The project is not considered growth inducing and would not directly or indirectly contribute to population growth. The proposed action would not require the acquisition or displacement of residents; thus, the project would not create a demand for additional housing.

Section 4(f). An evaluation pursuant to the requirements of Section 4(f) has been prepared and is included as Appendix B to this IS/EA.



PART I – HUMAN ENVIRONMENT

2.2 Land Use

This section addresses potential impacts to existing and planned land uses within the project area that could result from implementation of the proposed project alternatives.

2.2.1 Affected Environment

The proposed project site is located on the northeast side of the community of San Pedro within the City of Los Angeles at the Harbor Freeway, I-110/SR 47 interchange, and northwest of the Port of Los Angeles (Port or POLA) West Basin, which currently houses several active container terminals, including Yang Ming, China Shipping, Omni, and TraPac. The land use analysis focused on the properties within the project limits and the surrounding area potentially impacted by project construction and operation, which is approximately a 0.25-mile radius from the project site.

2.2.1.1 Existing Land Use

The I-110 access ramps at John S. Gibson Boulevard are located in front of the Gibson Gate driveway of the Port. At the John S. Gibson Boulevard exit, a single-lane NB I-110 off-ramp turns onto John S. Gibson Boulevard in front of the Gibson Gate. At the same location, a short two-lane on-ramp merges to NB I-110. Numerous railroad tracks are located behind the Gibson Gate. South of the John S. Gibson Boulevard/I-110 access ramps, traffic from westbound (WB) SR 47 merges to NB I-110 via a single-lane connector.

Land uses within the project study area are a mix of transportation facilities, industrial, commercial port, and residential neighborhoods. The area to the north of the project site is composed primarily of industrial uses serving the POLA, which is located east of the project site. Residential neighborhoods are located adjacent to the SR 47 and I-110 connector south of the project site. Commercial and residential uses are found on the west side of I-110.

Within the project area, a Pacific Harbor Line Railroad track runs parallel with John S. Gibson Boulevard on the east side of I-110 and parallel with Gaffey Street on the west side of I-110. The area underneath the Channel Street Overhead east of the railroad track, owned by the City of Los Angeles, is vacant and has been used for parking; however, over the past several years, a group of skateboarders have gathered and used the area to create a skate facility without a permit from either the City of Los Angeles or Caltrans. Although not officially sanctioned, this environmental document considers the use of this skate facility as an existing condition.

2.2.1.2 Land Use Designation and Zoning

The project site is located along the northeast border of the San Pedro Community Plan Area and the northwest border of the Port of Los Angeles Plan, both of which are part of the General Plan of the City of Los Angeles. Land use designations around the immediate vicinity of the project site include industrial, public facilities, and residential on the San Pedro Community Plan side and commercial/industrial (i.e., general/bulk cargo and commercial/industrial uses – nonhazardous) on the Port of Los Angeles Plan side. Zoning designations around the immediate vicinity of the project site include: PF – Public Facilities; R1 – Low Residential; R2 – Low Medium Residential; CM, MR1, M1 – Limited Industrial; MR2, M2 – Light Industrial; and OS – Open Space. Figures 2.2-1 and 2.2-2 show zoning and land use designations, respectively, for the surrounding area. Existing land uses adjacent to the proposed project area reflect the land use and zoning designations.

2.2.1.3 Development Trend

Developments at the Port of Los Angeles area and its vicinity are very dynamic. The LAHD operates the Port under the legal mandates of the Port of Los Angeles Tidelands Trust (Los Angeles City Charter, Article VI, Sec. 601; California Tidelands Trust Act of 1911) and the California Coastal Act (Public Resources Code [PRC] Div 20 S30700 *et seq.*), which identify the Port and its facilities as a primary economic/coastal resource of the state and an essential element of the national maritime industry for promotion of commerce, navigation, fisheries, and harbor operations. Activities should be water dependent and give highest priority to navigation, shipping, and necessary support and access facilities to accommodate the demands of foreign and domestic waterborne commerce. The LAHD is chartered to develop and operate the Port to benefit maritime uses and functions as a landlord by leasing Port properties to more than 300 tenants.

Key development around the Port area includes the San Pedro Waterfront Project, China Shipping Project, and TraPac Project. The overall purposes of the San Pedro Waterfront Project are to increase public access to the waterfront, allow additional visitor-serving commercial development within the Port, respond to increased demand in the cruise industry, and improve vehicular access to and within the waterfront area. The San Pedro Waterfront Project seeks to achieve these goals by improving existing infrastructure and providing new infrastructure facilities, waterfront linkages and pedestrian enhancements, increased development and redevelopment opportunities, and berthing opportunities for increased cruise ship capacity. The San Pedro Waterfront Project Environmental Impact Report was certified and approved on September 29, 2009.

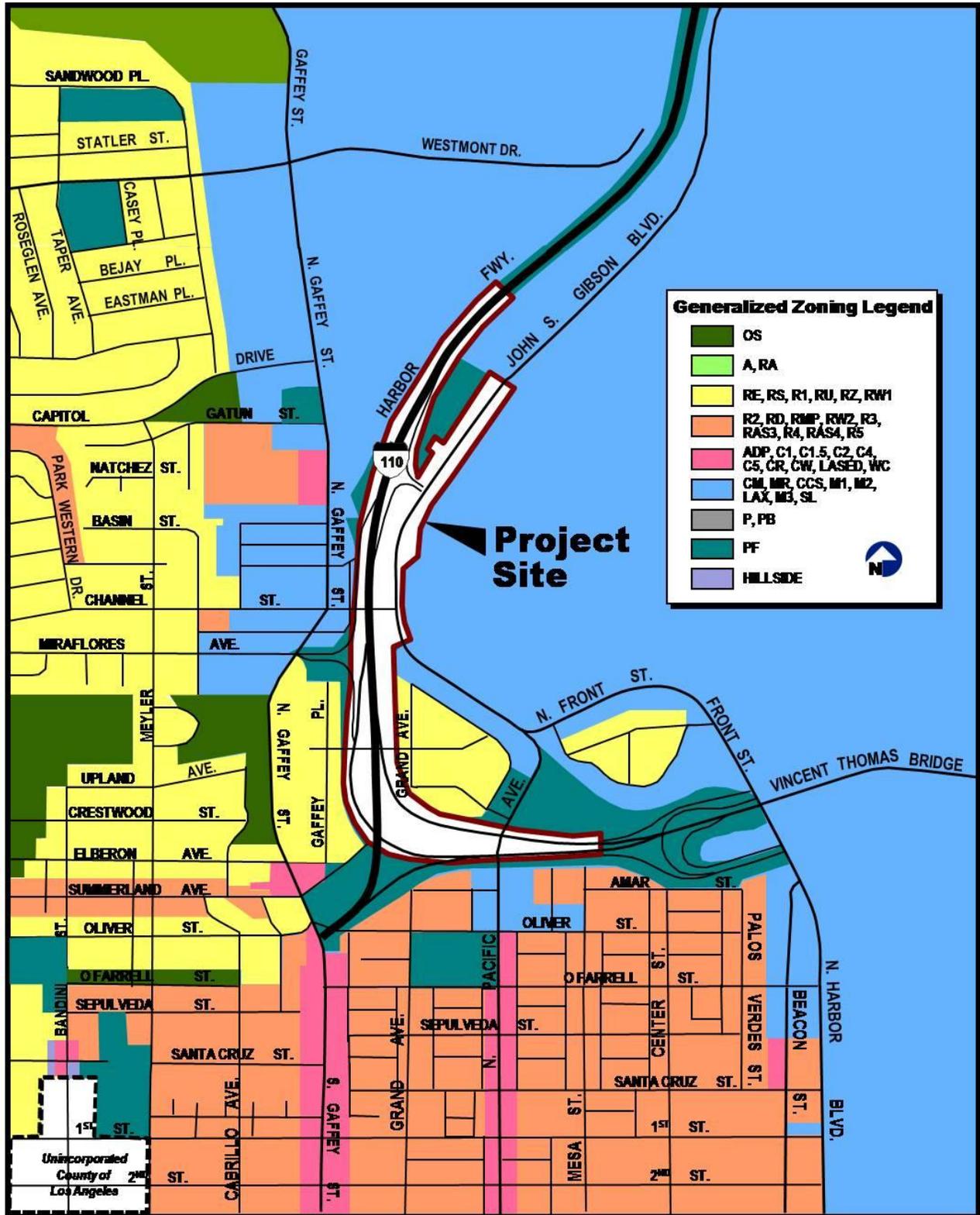


Figure 2.2-1 Generalized Zoning Map

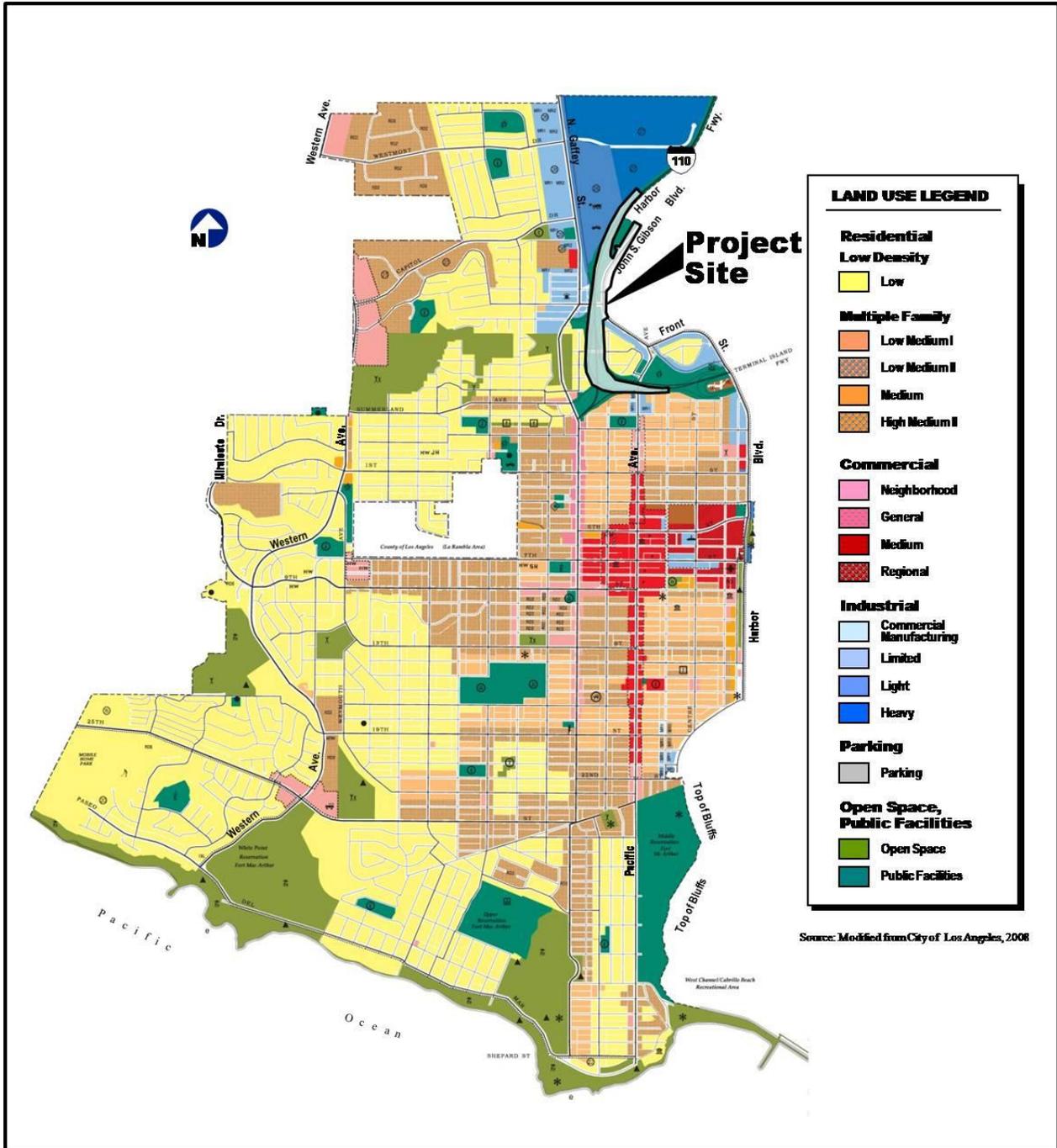


Figure 2.2-2 San Pedro Community Plan Land Use Map

The China Shipping Project is a new container terminal for the China Shipping Lines at Berths 97-109 in the Port of Los Angeles. Key elements of the project include new wharves; dredging; backlands development; terminal buildings; improvements to the terminal entrance; two bridges connecting Berths 97-109 with Berths 121-131; and the relocation of the Catalina Express terminal to Berth 95. The project is being constructed in three phases; Phase I has been constructed and is operating as a container terminal. Phases II and III are anticipated to be constructed in the near future. The project would operate at optimal capacity by 2030. When operating at optimal capacity, the improved Berths 97-109 Container Terminal could handle approximately 1,551,000 Twenty-Foot Equivalent Units (TEUs) per year, which represents an annual throughput of approximately 856,906 containers. To accommodate the annual throughput of 1,551,000 TEUs, 234 ship calls and associated tugboat operations would be required. In addition, 5,055 daily truck trips and up to 817 annual round-trip rail movements would be required.

The TraPac Project would expand and modernize the container terminal at Berths 136-147, upgrade existing wharf facilities, and install a buffer area between the terminal and the community. The project includes a 30-year lease and would involve two phases of construction (Phase I: 2008-2015, Phase II: 2015-2025). Throughput capacity is expected to be maximized in 2025 and then remain constant through 2038, the end of the 30-year lease period. Most of the improvements would occur on 176 acres currently used as a container terminal operated by TraPac, but the project includes adding 67 acres to the new terminal – 57 acres in Phase I and 10 acres in Phase II. The 57 acres added in Phase I are largely vacant or underutilized industrial lands adjacent to the existing terminal.

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

General and Community Plans

City of Los Angeles General Plan

The City of Los Angeles General Plan is a comprehensive, long-term plan for the physical development of the City. The City's General Plan includes the following citywide elements: Framework, Transportation, Infrastructure Systems, Housing, Noise, Air Quality, Conservation, Open Space, Historic Preservation and Cultural Resources, Safety, Public Facilities and Services, and Land Use. The City of Los Angeles' Citywide General Plan Framework Element establishes the broad overall policy and direction for the entire General Plan. It provides a citywide context and comprehensive long-range strategy to guide the General Plan's other elements.

The City's 35 community plans collectively comprise the Land Use Element of the General Plan. The Department of City Planning has established the New Community Plan Program (NCP) to

study the land use plans for the 35 community plans to ensure that they are kept up to date to effectively guide growth. The aim of this update is to encourage sustainable growth patterns while balancing the unique character of individual communities. Infrastructure, design, transportation, and mobility issues are also being addressed in the update. Only the Boyle Heights Community Plan is currently under study and review by the Department of City Planning. Until the updated community plans are approved, all current plans are still valid.

In addition to the NCPP, the Department of City Planning is preparing an Infrastructure Systems Element, Public Facilities and Services Element, and a Historic Preservation and Cultural Resources Element, each of which could affect the proposed project's study area. The proposed project's site is located in the northeast portion of the San Pedro Community Plan and is adjacent to the Port of Los Angeles Plan area.

San Pedro Community Plan

The San Pedro Community Plan's purpose is to support the goals and objectives of the General Plan by laying out policies and guidelines for development that will create a healthful and pleasant environment. The Community Plan also creates a plan for the arrangement of land uses, streets, and services that will encourage and contribute to the economic, social, and physical health, safety, welfare, and convenience of the people who live and work in the community. The San Pedro Community Plan Update was adopted March 17, 1999. Currently, the San Pedro Community Plan is under study and review by the Department of City Planning.

The San Pedro Community Plan Area (CPA) is located in the southern portion of the City of Los Angeles. San Pedro is geographically located on the Palos Verdes Peninsula at the southern terminus of I-110. It is adjacent to the community plan areas of Wilmington-Harbor City and the Port of Los Angeles, the Pacific Ocean, and the city of Rancho Palos Verdes.

The San Pedro Community Plan sets forth goals and objectives to maintain the community's individuality by:

- Preserving and enhancing the positive characteristics of existing residential neighborhoods while providing a variety of compatible new housing opportunities.
- Improving the function, design, and economic vitality of the commercial corridors and industrial areas.
- Preserving and enhancing the positive characteristics of existing uses that provide the foundation for community identity, such as scale, height, bulk, setbacks, and appearance.
- Maximizing the development opportunities around future transit system while minimizing any adverse impacts.

- Planning the remaining commercial and industrial development opportunity sites for needed job-producing uses that improve the economic and physical condition of the San Pedro Community Plan Area.

Relevant policies and objectives in the San Pedro Community Plan are as follows:

- Development of the Port of Los Angeles should be coordinated with surrounding communities to improve the efficiency and operational capabilities of the Port to better serve the economic needs of Los Angeles and the region, while minimizing adverse environmental impacts to neighboring communities from Port-related activities.
- Future development of the Port of Los Angeles should be coordinated with the San Pedro Community Plan, the Beacon Street Redevelopment Project, and development of the Central Business District of San Pedro.

Transportation-related goals relevant to the proposed project documented in the San Pedro Community Plan include Goal 14 – A system of highways, freeways, and streets that provides a circulation system that supports existing, approved, and planned land uses while maintaining a desired level of service at all intersections. The proposed project is consistent with Objective 14.1, which states –“To comply with Citywide performance standards for acceptable levels of service (LOS) and insure that necessary road access and street improvements are provided to accommodate traffic generated by all new development.”

Port of Los Angeles Plan

The Port of Los Angeles Plan is intended to serve as the official 20-year guide to the continued development and operation of the Port, and it is consistent with the Port Master Plan (discussed below). The Port of Los Angeles Plan contains the following objectives and policies applicable to the proposed project:

- **Objective 9.** To minimize conflicts between vehicular, pedestrian, railroad and harbor-oriented industrial traffic, tourist and recreational traffic, and commuter traffic patterns within the Port.
- **Policy 13.** Road, rail, and access systems within the Port and connecting links with road, rail, and access systems outside of the Port shall be located and designed to provide necessary, convenient, and safe access to and from land and water areas consistent with the long-term preferred uses for the Port and consistent with the applicable elements of the Los Angeles General Plan and the Local Coastal Program.

The Plan sets forth standards and criteria for future development and operation of the Port pertaining to the Port area circulation. The following measure is relevant to the proposed project:

- Improvement and expansion of street and freeway networks to increase traffic capacities or to eliminate congestion points.

Port of Los Angeles Master Plan

The Port of Los Angeles comprises 7,500 acres of land and water at its San Pedro Bay location, making it one of the largest manmade harbors in the world. Recognizing the essential need for Port planning and development that promotes and accommodates commerce, navigation, fisheries, and recreation, the Los Angeles Board of Harbor Commissioners approved a Port Master Plan (PMP) that was certified by the California Coastal Commission; the PMP became effective in April 1980 and was most recently revised in 2003. The PMP was prepared to address Port user needs and public concerns through short-term plans and long-range preferred use plans that adhere to federal, state, and local law.

The California Coastal Act, which was enacted by the State Legislature in 1976, provides for the protection of California's coastline through the authorization of local coastal programs to manage development in the coastal zone. The Coastal Act recognizes the importance of ports to the state's economy and the national maritime industry, and it established criteria for the preparation and implementation of PMPs.

The PMP divides the Port into a series of master planning areas for which it identifies short-term plans and preferred long-range uses. Master Plan Area 4 is located in the vicinity of the proposed project site. The primary purpose of the PMP is to guide future development of the Port of Los Angeles, which comprises public land and water held in trust by the City of Los Angeles under the California State Tidelands Grant. The PMP contains four major objectives:

1. To develop the Port in a manner that is consistent with federal, state, county, and city laws, including the California Coastal Act of 1976 and the Charter of the City of Los Angeles.
2. To integrate economic, engineering, environmental, and safety skills into the Port development process for measuring the long-term impact of varying development options on the Port's natural and economic environment.
3. To establish criteria that promote the orderly, long-term development and expansion of the Port by segregating related Port facilities and operations into functional areas.
4. To give the Port flexibility in its development planning so that it can adapt to changing technology, cargo trends, and regulations, as well as respond to competition from other U.S. seaports.

The Los Angeles Harbor Department LAHD created its PMP by defining nine planning areas within the coastal zone that cover all Port property, then identifying existing conditions, short-term plans, long-range preferred uses, and anticipated development projects for each area. The proposed John S. Gibson/I-110 interchange and SR 47/I-110 Connector is located adjacent to Port Planning Area 4 (West Basin). This area will be developed into a major container complex over the long term.

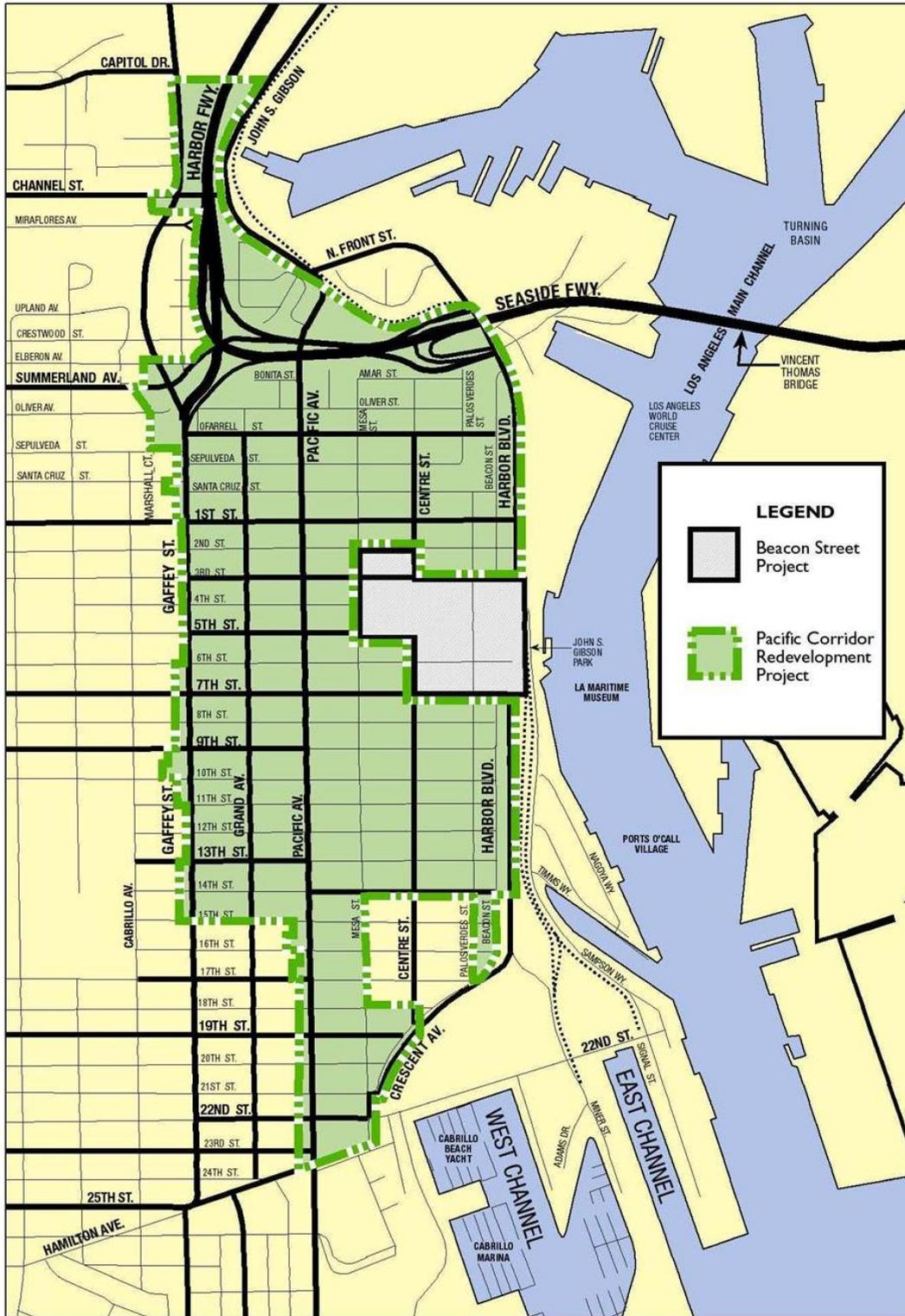
Pacific Corridor Redevelopment Plan

The Community Redevelopment Agency of the City of Los Angeles (CRA/LA) has been Los Angeles' public partner in housing, commercial, neighborhood, and economic development for more than half a century. CRA/LA is dedicated to revitalizing, refurbishing, and renewing economically underserved areas of Los Angeles. Since its creation in 1948, CRA/LA's main task is to make strategic investments to create economic opportunity and improve the quality of life for the people who live and work in Los Angeles neighborhoods.

The CRA/LA's Pacific Corridor Redevelopment Project, established in 2002, is located within the vicinity of the project site (Figure 2.2-3). The 693-acre project area extends from the south side of Knoll Hill and is bordered by Capitol Drive on the north, Gaffey Street on the west, 22nd Street on the south, and Harbor Boulevard on the east. The project includes development/rehabilitation of commercial/retail uses, a "welcome park," a transit center, additional parking, residential uses, and formation of an Arts District, and it provides business incentives and other strategies. Historically, Pacific Avenue served as the main commercial street for the San Pedro community in the downtown area. More recently, however, it became an economically stagnant area with many empty storefronts and a high incidence of crime and graffiti. Construction of the Gaffey Street off-ramp from I-110 further exacerbated the decline by redirecting potential customers (CRA/LA, 2002). The proposed John S. Gibson Interchange/SR 47/I-110 Connector Project would not conflict with the Pacific Corridor Redevelopment Project.

Transportation Plans and Programs

Southern California Association of Governments (SCAG) is the federally designated Metropolitan Planning Organization (MPO) for the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG develops the Regional Transportation Plan (RTP) to provide a regional investment framework to address the region's transportation and related challenges. Transportation investments in the SCAG region that receive state and federal funds or require federal approvals (e.g., environmental clearance) must be consistent with the RTP and must be included in SCAG's Regional Transportation Improvement Program (RTIP) when ready for funding.



Source: Community Redevelopment Agency, Los Angeles 2008

Figure 2.2-3 Location of Pacific Corridor Redevelopment Project

The 2008 RTP presents the transportation vision for this region through the year 2035. Major goals of the 2008 RTP include:

- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment, improve air quality, and promote energy efficiency
- Encourage land use and growth patterns that complement our transportation investments
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

The proposed project was originally listed in SCAG's federally approved 2008 RTP, and *2008 RTIP – Including Amendments 1-15 and 17* in the "Los Angeles County – Local Highway Listing" with the following reference:

–HD: LA0D390 – Description: The project improves the intersection and I-110 on/off-ramps at John S. Gibson; and enhances the operation and safety of the I-110/SR 47/ Harbor Blvd. Interchange connector (SAFETEA-LU HPP # 2885). Addition of left- and right-turn lanes."

The scope of the project was slightly modified, and the revised description is included in 2008 RTP Amendment #3 and RTIP Amendment #08-34, with the following description:

–HD: LA0D390 – Description: Improve I-110 northbound at the John S. Gibson Blvd. (JSG) northbound ramps and the SR 47/I-110 connector consisting of: widening the SB SR-47 to NB I-110 connector (from SR-47 Post Mile 0.72, Station 535+00 to NB I-110 north of the JSG off-ramp); widening the northbound I-110 on-ramp at JSG; and improving the intersection of JSG Blvd. and the Fwy. ramps with improved turning radii and restriping."

The concept and scope of the proposed project is consistent with the project description in the RTIP and the assumptions in SCAG's regional air quality emissions analysis. As such, the project will not interfere with the timely implementation of all Transportation Control Measures (TCMs) identified in the currently approved State Implementation Plan (SIP). Because the proposed project is included in the regional analysis for determining emissions budgets of the latest RTIP and its amendments, the project meets the regional air quality conformity criteria. As such, project development would not conflict with or obstruct implementation of the SIP or

TCMs. No significant regional impacts would occur from operation of the proposed project, and no mitigation measures would be required.

2.2.1.5 Coastal Zone

The proposed project is located within the coastal zone. The Coastal Zone Management Act of 1972 (CZMA) 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 programs. 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; protection, enhancement, and restoration of environmentally sensitive areas; protection of agricultural lands; protection of scenic beauty; and 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 (i.e., 15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A federal consistency determination may be needed as well.

The proposed project is located within the coastal zone; therefore, a permit will need to be obtained from the Los Angeles Harbor Commission once the environmental document has been approved and certified.

2.2.1.6 Wild and Scenic Rivers

There are no wild and scenic rivers within the project study area.

2.2.1.7 Parks and Recreational Facilities

The closest public park to the project site is Leland Recreational Center, located at 863 S. Herbert Avenue in San Pedro, which is approximately 0.2-mile to the west (see Figure 2.2-4). Recreational facilities offered at this park include basketball courts, baseball diamond, children play area, picnic tables, and volleyball courts. Since the park is located on the west side of the I-110 freeway and is buffered by the entire residential community along Gaffey Street that is



Figure 2.2-4 Nearby Park Location Map

situated at higher elevation than the project site, no direct or indirect impact to this park would occur. Since the Leland Recreational Center is a public park, it is subject to protection pursuant to Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303. As described earlier, the proposed project improvements would not result in either direct or indirect use of this recreational center, no adverse impact would occur as documented in –Appendix B – Resources Evaluated Relative to the Requirements of Section 4(f)” of this IS/EA.

In addition to the Leland Recreational Center, a group of skateboarders has gathered and used the area underneath the Channel Street Overhead for skateboarding activities (see Figure 2.4-4). The facility has been constructed using donation money from various supporters without an official permit from the City of Los Angeles or Caltrans. Operation and maintenance of the facilities are performed solely by the Channel Street Skate Association, which is a recently formed nonprofit organization. This skateboarding facility has not been determined as a Section 4(f) resource as documented in –Appendix B – Resources Evaluated Relative to the Requirements of Section 4(f)” of this IS/EA. In addition, no impact from the proposed project improvement would occur to the area under the Channel Street Overhead in the long term.

2.2.2 Environmental Consequences

2.2.2.1 Construction Impacts

No Build Alternative

The No Build Alternative proposes no construction or physical changes in the project area. As a result, no direct or indirect land use effects would occur with implementation of the No Build Alternative.

Build Alternative

Construction of the proposed project would create some inconvenience for the current use of land due to equipment operations and temporary traffic lane closure to accommodate construction activities. Moreover, access to businesses situated in the vicinity of the project site could be restricted. A traffic staging plan would be developed to minimize these effects. In addition, the skate facilities located underneath the Channel Street Overhead would have to be temporarily closed for the safety of the skaters. To ensure the health and safety of the skateboarders, the skate facility would be closed during the Channel Street widening construction.

Because the use of the area underneath the Channel Street Overhead for skating activities has not been permitted by the City of Los Angeles, who is the official owner of this property, the decision to allow the use of this land for skating activities after completion of the proposed

project would rest with the City of Los Angeles and is beyond the mitigation scope of this project.

2.2.2.2 Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or physical changes in the project area. As a result, no direct or indirect land use effects would occur with implementation of the No Build Alternative.

Build Alternative

Implementation of the proposed project would not require land use or zoning modifications at the project site or its surrounding area. The proposed project would not be in conflict with land use goals and policies of the City of Los Angeles General Plan and Community Plans, or with the Port's PMP.

The proposed improvements would be mostly within the City of Los Angeles and Caltrans right-of-way (ROW). Widening of the I-110 NB on-ramp would require a partial acquisition of one City-owned property (Harbor Police Station – 2175 John S. Gibson Boulevard) and an aerial easement over the Pacific Harbor Line Railroad track. These acquisitions would not result in obstruction of current or planned operations of the subject properties.

2.2.3 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No mitigation is required under this alternative.

Build Alternative

Construction

Disruption of use during project construction as a result of construction activities would be mitigated by implementing a traffic staging plan and a Traffic Management Plan (TMP).

MM LU-1 The LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the City of Los Angeles Department of Transportation and Caltrans, and it shall be provided with the construction plan to the City of Los Angeles Police and Fire Departments prior to commencement of construction activities. The TMP shall include, but is not limited to, the following implementation plans:

- Public Information: Provide project update to affected residents and businesses, including general public, via brochures and mailers, community meeting, and Website.
- Motorist Information: Provide project information using changeable message signs and ground-mounted signs.
- Incident Management: Implement Construction Zone Enhanced Enforcement Program (COZEEP), freeway service patrol, and California Highway Patrol (CHP) traffic handling.
- Traffic Management during Construction: Provide traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes, and temporary traffic signal during construction.

Permanent

Because there would be no change to existing land use and zoning over the long term with the Build Alternative, no mitigation is required.



2.3 Community Character and Cohesion

Community cohesion is the degree to which residents have a “sense of belonging” to their neighborhood, a level of commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually because of continued association over time.

2.3.1 Regulatory Setting

NEPA, as amended, established that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions regarding 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 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. Because 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.

2.3.2 Affected Environment

2.3.2.1 Study Area Definition

The project site is located in the community of San Pedro, within the City of Los Angeles, at the Harbor Freeway, I-110/SR 47 interchange. The Port of Los Angeles and the Port of Long Beach are located adjacent to the project site. The geographical area identified for the community impacts assessment covers the area that would potentially be either directly or indirectly affected by the proposed project activities. The primary impact area is located within a 0.25-mile radius of the project limits. A variety of land uses exist in the study area, including port/industrial, commercial, and residential.

2.3.2.2 Community Characteristics

The project site is situated within a transportation corridor adjacent to residential neighborhoods along the east side of the SR 47/I-110 Connector; the Harbor Police Station on parcels between John S. Gibson Boulevard and the NB I-110 off-ramp; and industrial uses along the west side of I-110. A Pacific Harbor Line Railroad track runs parallel to John S. Gibson Boulevard, under

I-110 near Channel Street, and parallel to Gaffey Street at the northern portion of the proposed project site.

The northern portion of the study area is composed primarily of industrial uses serving the Port of Los Angeles. The southern portion of the study area consists of residential neighborhoods separated by freeways, while the eastern portion is dominated by the Port of Los Angeles terminal facilities. The western portion of the study area consists mostly of commercial uses. Port operations dominate the activity in the area. Residential neighborhoods line the project study area.

Three residential communities are adjacent to the project site; one is located east of the SR 47/I-110 Connector, one is located to the west of I-110, and one is located to the south of SR 47. These residential areas are well landscaped and are surrounded primarily by transportation and industrial uses.

Within the study area, John S. Gibson Boulevard separates the port activities on the east side of the street from the commercial uses on the west side. Several railroad tracks line the port side of John S. Gibson Boulevard. In their current condition, these tracks are used for storage purposes rather than an active railroad line.

At the Channel Street Overhead to the north of the SR 47/I-110 interchange, a skate facility exists underneath the freeway. This parcel of land is owned by the LAHD, and Caltrans has aerial easement (space above the land) underneath the freeway. Although unpermitted, this skate facility has received significant local support, including political support from the office of City Councilwoman Janice Hahn. The skate facility was created in 2002 by a group of local skateboarders who were unsuccessful at building an official skate park in an existing community park location. Since the creation in 2002, there have been continuous efforts by the local community to improve the facility, including construction of cement structures and tiled artwork by local school children. The Channel Street Skate Park, which is a nonprofit organization, has been created to support the skate park, with a volunteer staff maintaining the facility. However, the skateboarders come and use this facility at their own risk.

During the open house for this proposed project, 12 of 46 comments received were related to impacts to and preservation of the skate facility, and there were a number of community members present at the meeting voicing their support for the skate facility. Although this is an unpermitted use, the skate facility is recognized as a significant community feature and gathering place.

2.3.2.3 Socioeconomic Characteristics

Socioeconomic and demographic data for the study area were reviewed and analyzed from the year 2000 census. The four census tracts and nine block groups under study cover the project site, its immediate surrounding area, and the area within 0.25-mile of the proposed project that could potentially be affected by traffic detour routes during proposed project construction; these consist of census tracts 2951.01, 2962.10, 2963, and 2965 and block groups 2951.01-2, 2951.01-3, 2962.10-1, 2962.10-2, 2962.10-3, 2963-1, 2965-1, 2965-2, and 2965-3. Figure 2.3-1 shows the census tracts and block groups within the study area.

Population Demographics

Year 2000 U.S. Census data from the four study area census tracts and nine block groups were used to characterize population demographic features within the proposed project area. These data can be compared with City and County of Los Angeles statistics in Table 2.3-1. The population of these block groups is 12,896 residents, which is approximately 0.4 percent of the population of the City of Los Angeles (Table 2.3-1). The percentages of the working age (20 to 64) population within the study census tracts range from a low of 54 percent (Tract 2962.10 Block Group 3) to a high of 72 percent (Tract 2962.10 Block Group 2) of the total population, which is similar to both the County (59 percent) and City of Los Angeles (61 percent).

**Table 2.3-1
Age Characteristics of Populations within the Study Area**

	County of Los Angeles		City of Los Angeles		Census Tracts		Block Groups	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Population	9,519,338	100	3,694,820	100	16,190	100	12,896	100
Population 19 or younger	2,946,796	31	1,091,049	29	4,708	29	4,072	31
Population 20 to 64	5,645,869	59	2,246,642	61	9,788	60	7,448	58
Population 65+	926,673	10	357,129	10	1,694	11	1,376	11

Source: 2000 U.S. Census.

Table 2.3-2 presents the racial composition of the population in the study block groups and the larger region. The study block groups contain a wide range and higher percentage of Hispanic or Latino population (ranging from 17 to 89 percent) compared to the City and County of Los Angeles, which have approximately 45 and 47 percent Hispanic or Latino population, respectively. The percentage of white population within the block groups under study is similar to the City and County of Los Angeles as a whole; however, upon analysis of individual block groups, a different racial characteristic is observed. The population percentage of the white

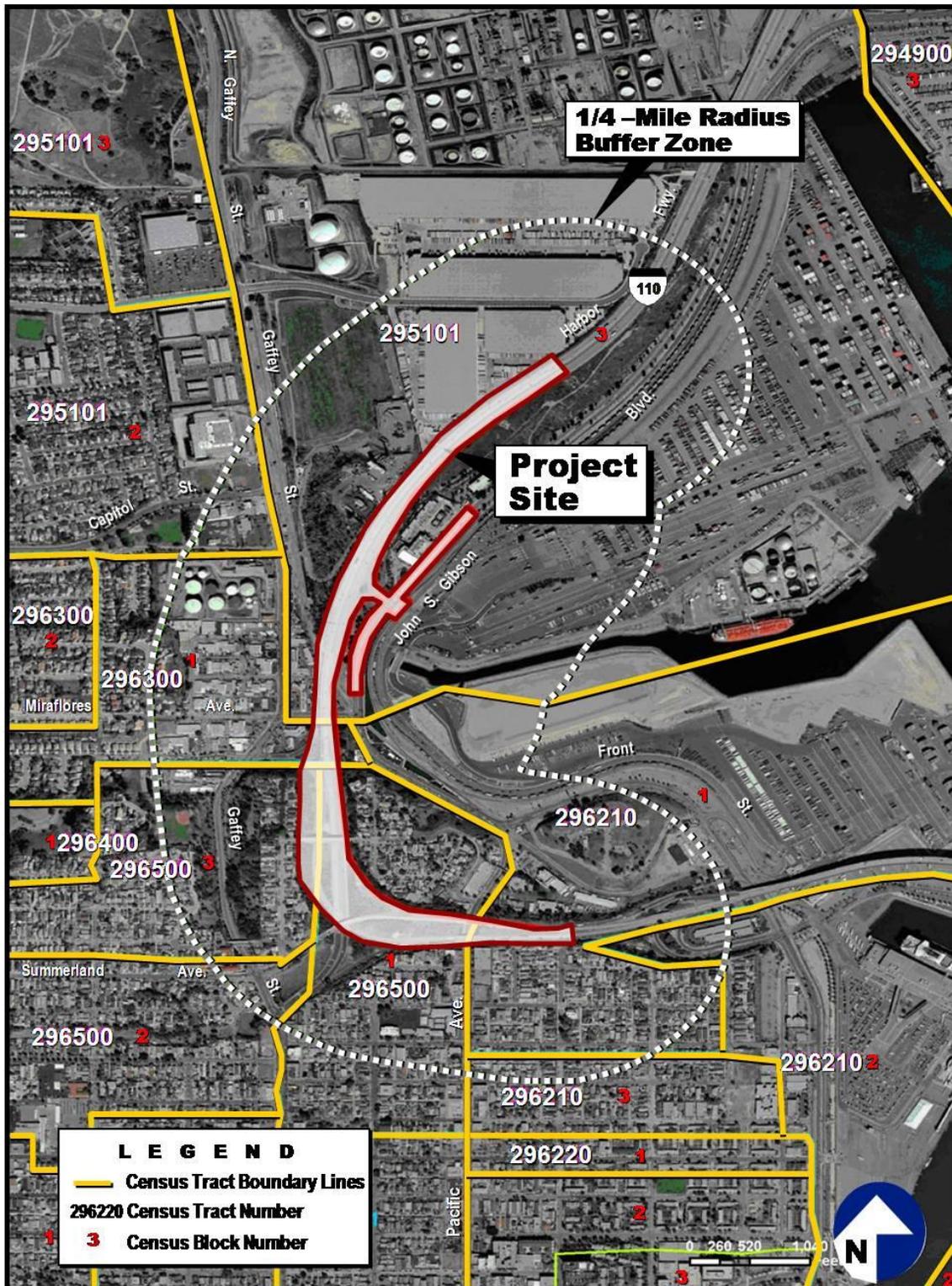


Figure 2.3-1 Study Area Census Tracts and Block Groups

population in all block groups, with the exception of Tract 2951.01 Block Group 2, is much lower than the City and County of Los Angeles. Based on this statistic, the study area is considered a predominantly minority community compared to the larger population within the County of Los Angeles.

**Table 2.3-2
Racial Composition of Populations within the Study Area**

	County of Los Angeles		City of Los Angeles		Census Tracts		Block Groups	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Population	9,519,338	100	3,694,820	100	16,190	100	12,896	100
White	2,959,614	31.1	1,099,188	29.7	6,267	38.7	4,463	34.6
Black or African American	901,472	9.5	401,986	10.9	1,046	6.5	808	6.3
American Indian or Alaskan Native	25,609	0.3	8,897	0.2	64	0.4	63	0.5
Asian	1,124,569	11.8	364,850	9.9	1,053	6.5	571	4.4
Native Hawaiian or Pacific Islander	23,265	0.2	4,484	0.1	59	0.4	56	0.4
Some Other Race	19,935	0.2	9,065	0.2	22	0.1	14	0.1
Two or More Races	222,661	2.3	87,277	2.4	418	2.6	307	2.4
Hispanic or Latino	4,242,213	44.6	1,719,073	46.5	7,261	44.8	6,614	51.3

Source: 2000 U.S. Census.

Socioeconomic Demographics

As shown in Table 2.3-3, 4,407 households are located within the study block groups. The average household size within the study area block groups ranges between approximately 2 and 5 persons. Tract 2951.01 Block Group 3 is the anomaly within the study area with 5.2 persons per household. This block group is the largest under study and extends beyond the study area boundaries. It does not contain any residential communities within the proposed project area. All residential communities within this block group are located outside the 0.25-mile radius. The remainder of the block groups within the study area is essentially in the same range as the City and County of Los Angeles, with 2.8 and 3.0 persons, respectively. Following the same pattern as the average household size, the average family size in the study block groups is within a similar range compared to the City and County of Los Angeles with 3.6 persons. Tract 2951.01 Block Group 3, on the other hand, contains an average family size of 5.3 persons.

As shown in Table 2.3-3, median annual household incomes within the study block groups range from \$21,719 to \$68,318. Most of the block groups are roughly in line with the median

household incomes for the City of Los Angeles at \$36,687 and County of Los Angeles at \$42,189. Tract 2951.01 Block Group 2, however, consists of the highest household incomes within the study area. The median annual family incomes for the study census tracts follow the same pattern as the household annual incomes.

**Table 2.3-3
Socioeconomic Characteristics of the Study Area**

	County of Los Angeles		City of Los Angeles		Census Tracts		Block Groups	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Population	9,519,338	100	3,694,820	100	16,190	100	12,896	100
Total Population over 16	7,122,525	100	2,809,852	100	12,374	100	9,586	100
In Labor Force over 16	2,358,802	33	934,013	33	4,262	34	3,225	34
Unemployed over 16	354,347	5	156,578	6	509	4	418	4
Per Capita Income	\$20,683	---	\$20,671	---	\$21,259	---	\$15,650	---
Individuals Earning below Poverty Level	1,674,599	18	801,050	22	2,454	15	2,306	18
Total Families	2,154,311	100	807,039	100	4,019	100	3,207	100
Average Family Size	3.6	---	3.6	---	3.4	---	3.8	---
Median Family Income	\$46,452	---	\$39,942	---	\$54,760	---	\$37,065	---
Families below Poverty Level	311,226	14	147,516	18	487	12	469	15
Total Households	3,133,774	---	1,275,412	---	5,930	---	4,407	---
Average Household Size	3.0	---	2.8	---	2.8	---	3.3	---
Median Household Income	\$42,189	---	\$36,687	---	\$45,892	---	\$35,697	---

Source: 2000 U.S. Census.

Individual earnings in 1999 below the poverty level, which is defined as a minimum income level below which a person is officially considered to lack adequate subsistence and to be living in poverty, within the study block groups are reported between 4 and 35 percent, compared to the City of Los Angeles at 29 percent and the County of Los Angeles at 24 percent. The percentage of family incomes below the poverty level within the study block groups is 15 percent, compared to that of the City of Los Angeles at 18 percent and the County of Los Angeles at 14 percent. There is a wide range of variation in socioeconomic statistics for this study area, with between 4 and 33 percent of families living below established poverty levels.

The U.S. Department of Health and Human Services (HHS) establishes the poverty threshold on an annual basis. A family is considered “low-income” if its income is at or below the HHS poverty guidelines. The Year 1999 poverty threshold for an average family size of four was \$16,700. Based on the HHS thresholds for poverty, the study area is not at the poverty level; however, considering the “needs-based” poverty threshold developed by the Los Angeles Alliance for a New Economy (LAANE), the working poor (i.e., a working poor family must have at least one member who reported income from work in the last year) in the County of Los Angeles is defined as individuals with a total family income below 200 percent of the federal poverty level.

The “needs-based” poverty threshold determined by LAANE was based on two criteria: the income levels at which families are still eligible for government anti-poverty programs, and the actual cost of living in the County of Los Angeles. Based on this study, the poverty threshold of the working population in Los Angeles County was \$33,300 for a family of four in 1998. The study pointed out that during the 1990s, the number of poor families rose from 36 percent to 43 percent of the population in Los Angeles County and accounted for 4.1 million residents according to the needs-based poverty threshold. Because the median annual household incomes within the study block groups range from \$21,719 to \$68,318, most of the study area population is considered low-income based on the “needs-based” poverty threshold for Los Angeles County.

Unemployment

As shown in Table 2.3-3, Year 2000 U.S. Census data indicate that 4.4 percent of the population over the age of 16 within the study block groups was unemployed at the time of the survey, which is roughly equivalent to the percentage of unemployed individuals in the City and County of Los Angeles, at 5 and 6 percent, respectively.

Housing Demographics

Using Year 2000 U.S. Census housing characteristic data, as shown in Table 2.3-4, 4,590 housing units were located within the study block groups, compared to 1,337,706 in the City of Los Angeles. The study block groups have a lower percentage of renter-occupied units than the City or County of Los Angeles. The study block groups contain 43 percent renter-occupied units, while the City of Los Angeles contains 59 percent renter-occupied housing units, indicating more homeowners living in the proposed project area than in the surrounding area.

**Table 2.3-4
Housing Characteristics of the Study Area**

	County of Los Angeles		City of Los Angeles		Census Tracts		Block Groups	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	3,270,909	100	1,337,706	100	6,640	100	4,590	100
Owner Occupied	1,499,744	46	491,882	37	3,401	51	2,425	53
Renter Occupied	1,634,030	50	783,530	59	2,529	38	1,982	43
Vacant	137,135	4	62,294	5	710	11	183	4

Source: 2000 U.S. Census.

2.3.3 Environmental Consequences

2.3.3.1 Construction Impacts

Impacts on community character and cohesion are addressed by how proposed projects are likely to affect the people, institutions, neighborhoods, service delivery organizations, and overall social and economic systems surrounding a proposed undertaking.

No Build Alternative

The No Build Alternative proposes no construction or physical changes in the project area. As a result, no direct effects would occur with implementation of the No Build Alternative.

Build Alternative

The Build Alternative would involve more than a year of construction. During project construction, residents may occasionally experience some inconvenience due to construction equipment and material obstruction. Temporary construction easements (TCEs) would be required from the front row of residential properties located east, west, and south of the interchange for construction of soundwalls and retaining walls; however, an access obstruction in and out of the residential homes adjacent to the construction zone is not anticipated. Because the proposed improvements would be constructed along the existing ROW corridor, no community or neighborhood would be divided or adversely impacted. The only public facility where local residents perform social functions together that would be temporarily closed during construction of the proposed project is the skate facility. Therefore, no substantial impacts to community cohesion would occur. Another public facility that might be affected by the construction activities would be the Harbor Police Station as a result of NB I-110 on-ramp widening and John S. Gibson Boulevard widening. The impact would range from traffic delay from construction equipment operation and a partial lane closure on an occasional basis. The impact can be minimized by implementation of the TMP to be developed and implemented by the LAHD through its construction contractor.

Construction of the Channel Street Overhead widening would require temporary closure of the skate facility located underneath the freeway to ensure safety of the general public. The skaters would have to use the nearby skate facility in Wilmington, which is located less than 1.5 miles away at 325 Neptune Avenue. Although this skate facility has not been legally permitted by the City of Los Angeles or Caltrans, it has been used by area residents for several years. Local residents have voiced their concern about the loss of the facility due to the proposed project construction because this skate facility has been used as a place for kids to have social and sport functions together. Caltrans and the LAHD realize the importance of the facility to the local residents and would try to work around to save the facility for use after construction is completed. The LAHD would also try to work with the skaters to encourage them to legalize the facility in the future.

2.3.3.2 Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or physical changes in the project area. As a result, no direct effects would occur with implementation of the No Build Alternative.

Build Alternative

Implementation of the Build Alternative would not change the existing character of neighboring communities within the project area. Furthermore, it would not create any new roadways that transect any community or obstruct the ongoing activities of the area neighborhoods; therefore, no impacts on neighborhoods or community cohesion would be expected to occur. Once construction is complete, the skaters would be able to continue their activities at the area under the Channel Street Overhead.

2.3.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

There would be no need for avoidance, minimization, or mitigation measures under the No Build Alternative.

Build Alternative

Construction

The Port would undertake a public information and notification program to keep area residents informed of the project construction schedule, traffic lane closure schedule, and the traffic detour plan. A TMP, including construction staging and detour plans, if needed, would be developed and implemented to minimize traffic delays and impacts to the community.

- MM CCC-1 The LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the City of Los Angeles Department of Transportation and Caltrans, and it shall be provided with the construction plan to the City of Los Angeles Police and Fire Departments prior to commencement of construction activities. The TMP shall include, but is not limited to, the following implementation plans:
- Public Information: Provide project update to affected residents and businesses, including general public, via brochures and mailers, community meeting, and Website.
 - Motorist Information: Provide project information using changeable message signs and ground-mounted signs.
 - Incident Management: implement Construction Zone Enhanced Enforcement Program (COZEED), freeway service patrol, and California Highway Patrol (CHP) traffic handling.
 - Traffic Management during Construction: Provide traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes, and temporary traffic signal during construction.
- MM CCC-2 The LAHD would continue the public outreach program to keep residents, businesses, and any service providers within the project area informed, and to inform surrounding communities about the project construction schedule, traffic-impacted areas and the TMP, and other relevant project information.
- MM CCC-3 The LAHD would coordinate with the Channel Street Skate Boarding Association to keep skaters informed of the proposed project schedule and the period that the skate facility needs to be closed.
- MM CCC-4 The LAHD would work in cooperation with Caltrans, City of Los Angeles Department of Recreation and Parks, Council District 15, and the Channel Street Skate Boarding Association to encourage the skate facility to apply for an operation permit for the facility.

Permanent

No mitigation is required.



2.4 Relocations and Real Property Acquisitions

This section addresses impacts to the communities as a result of required ROW acquisitions and project construction activities

2.4.1 Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 CFR Part 24, as summarized below. 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. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, *et seq.*). Please see Appendix D for a copy of Caltrans' Title VI Policy Statement.

2.4.2 Affected Environment

Existing land uses within the project area are described in detail in Section 2.2.1. Three residential neighborhoods are located within the vicinity of the I-110 and SR 47 interchange, as shown in Figure 1-2. These residential areas are surrounded primarily by transportation and industrial uses. The Harbor Community Police Station, located at 2175 John S. Gibson Boulevard, is the closest public facility to the project site. A private strip of land is located between John S. Gibson Boulevard and the I-110 NB on-ramp. An unpermitted skate facility is located underneath the Channel Street Overhead where the bridge widening is proposed. The Pacific Harbor Railroad track is located underneath the Channel Street Overhead adjacent to the skate facility.

2.4.3 Environmental Consequences

2.4.3.1 Construction Impacts

No Build Alternative

Under the No Build Alternative, no property acquisition or construction easement would be required.

Build Alternative

Most of the improvements for the proposed project are within Caltrans' ROW. Construction of the proposed project would require partial acquisition of a small parcel housing the Harbor Police Station, owned by the City of Los Angeles (see Section 2.4.3.2 for detailed information). The acquisition of a sliver of this parcel would not result in closure of the police facility or a reduction of any policing activity; however, traffic congestion along the John S. Gibson

Boulevard on- and off-ramps could occur occasionally, resulting in some delay in emergency response activities. Implementation of the TMP, as outlined in Section 2.3.3.3, would minimize this impact.

Construction of the Build Alternative, specifically during Channel Street Overhead widening, would require temporary closure of the skate facility under Channel Street Overhead and the immediate area adjacent to the construction zone, to ensure the health and safety of the public. For the impact of the temporary closure, the project would be in full compliance with the Uniform Act.

Construction of soundwalls along the property line of the first-row residences within the project area would require temporary construction easements (TCE). The property owners who voted in favor of the soundwalls are expected to provide a TCE to Caltrans to accommodate soundwall construction. For those who voted against the soundwall, Caltrans would try to identify a design option to work within the Caltrans' ROW to the extent feasible.

In addition to the above, an aerial easement would be required from the Port to widen the Channel Street Overhead crossing the railroad track.

2.4.3.2 Permanent Impacts

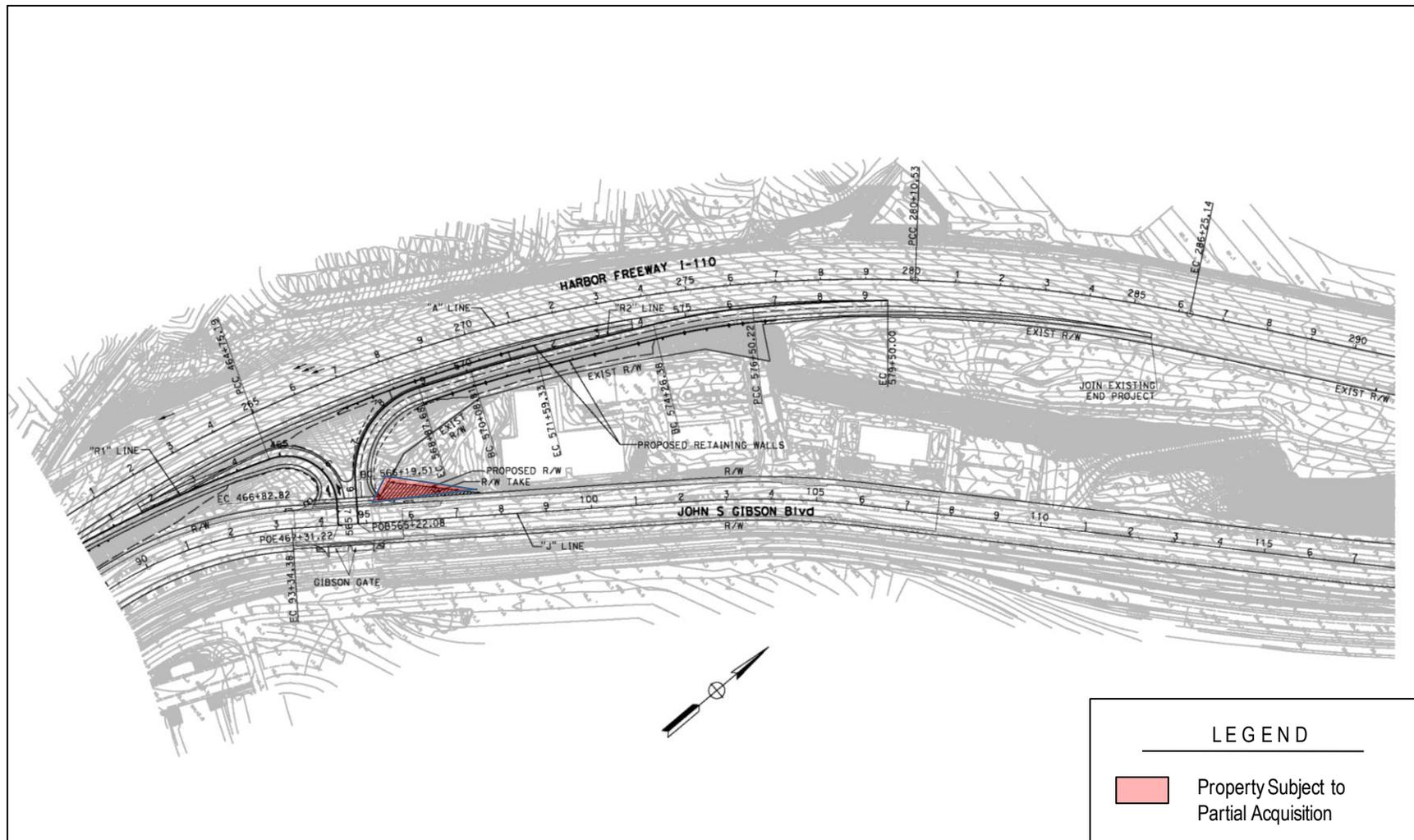
No Build Alternative

No impact would occur with the No Build Alternative.

Build Alternative

Implementation of the Build Alternative would not result in the relocation of any residences or businesses within the project area. The project would not impose any permanent adverse impact to the unpermitted Channel Street Skate Facility after the construction is completed. The proposed project would require partial acquisition of a small parcel (approximately 0.5-acre) housing the Harbor Police Station (APN #7440016911, 2175 John S. Gibson Boulevard), owned by the City of Los Angeles, as shown in Figure 2.4-1. This small area of the Harbor Police Station is currently used as a parking lot and has already been dedicated to the LAHD to accommodate this roadway improvement project.

In addition to the permanent property acquisition, an aerial easement (aerial space above the land) above the Pacific Harbor Line Railroad track located underneath the Channel Street Overhead would be required to accommodate construction of the Channel Street Overhead widening. A footing easement would also be acquired from Caltrans for maintenance purposes during post construction. The acquisition of an aerial easement would not cause railroad operation disruptions.



2.4.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No mitigation is required.

Build Alternative

Because the only parcel subject to acquisition is owned by the City of Los Angeles and has been dedicated to the LAHD to accommodate this roadway improvement project, no further mitigation is required.

The LAHD will be in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) for the impact of the temporary closure of the Channel Street Skate Facility.



2.5 Environmental Justice

Potential environmental justice impacts are defined as those unavoidable adverse effects that would be disproportionately borne by minority and/or low-income populations or are greater in magnitude than the adverse effects that would be suffered by non-minority and/or higher-income populations.

2.5.1 Regulatory Setting

All projects involving a federal action (i.e., 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 Clinton on February 11, 1994. This Executive Order 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 1999, this was \$16,700 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. The Department's commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix F.

2.5.2 Affected Environment

Based on population demographic data (see Section 2.3.2.3), the study area is considered a predominantly minority community compared to the larger population within the County of Los Angeles. Based on socioeconomic data (see Section 2.3.2.3), the study area population is considered low-income based on the "need-based" poverty threshold for Los Angeles County.

2.5.3 Environmental Consequences

2.5.3.1 Construction Impacts

No Build Alternative

Under the No Build Alternative, no construction activities would occur; therefore, no disproportionate impacts to minority or low-income populations would occur.

Build Alternative

The project study area contains predominantly minority and low-income populations compared to the larger area within the City and County of Los Angeles. Construction activities would result in occasional traffic delays due to construction equipment operation. An Air Quality Technical Study was conducted utilizing guidelines and procedures provided in applicable air quality analysis protocols, such as the *Transportation Project-Level Carbon Monoxide Protocol*, FHWA and United States Environmental Protection Agency (EPA), *Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas* (Guidelines), and San Pedro Bay Ports *Clean Air Action Plan* (CAAP). The results of an air quality analysis reveal that air pollutant emissions could occur on a temporary basis from the use of construction equipment. Noise level elevation would also occur on a temporary basis as a result of construction equipment operations.

Construction of the Channel Street Overhead would require temporary closure of the skate facility located underneath the freeway to ensure the safety of the skaters during construction. Although not legally permitted, this skate facility has been viewed by the general public as one of the recreational resources that keeps kids in the neighboring communities away from drugs. The skaters would have to use the nearby skate facility in Wilmington, which is located less than 1.5 miles away at 325 Neptune Avenue. The impact is temporary, and the skaters can continue using this facility after construction is completed.

Based on the above effects, construction of the Build Alternative would cause disproportionately high adverse effects on minority and/or low-income populations living closer to the construction zone per EO 12898 regarding environmental justice.

2.5.3.2 Permanent Impacts

No Build Alternative

The No Build Alternative proposes no construction or physical changes in the project area; therefore, no disproportionate impacts to minority or low-income populations would occur.

Build Alternative

Relocation of residences and businesses within the project area would not be required as a result of the proposed construction activities. Widening of the NB I-110 on-ramp would require an acquisition of a 0.5-acre parcel currently used as part of the parking lot for the Harbor Police Station. The land is owned by the City of Los Angeles, which is not a minority or low-income individual; therefore, acquisition of this property would not result in disproportionate high adverse impacts on minority and/or low-income populations within the project area.

Several residents have voiced their concern about impacts to their properties from truck traffic, freeway noise, and air pollutant emissions. A Traffic Analysis Report, Noise Study, and Air Quality Technical Study have been conducted as part of this environmental document to identify the level of impacts on a local and regional basis. The main purpose of the proposed Build Alternative is to alleviate traffic congestion around the interchange. The purpose of lane additions within the project limits is to improve traffic operations and enhance safety. The project does not intend to increase the traffic volumes along the SR 47/I-110 Connector or the I-110 freeway.

The Noise Study Report was conducted following Caltrans protocol. Based on the noise modeling results, there would be no significant increase in noise levels under the “with” and “without” project conditions for the future horizon year (2035) at the nearby residential areas west of I-110, east of the SR 47/I-110 Connector, and south of SR 47. The noise levels of all of these residential areas have currently approached or exceeded the noise abatement criteria for residences. As part of this project, Caltrans and the Port propose to construct a series of soundwalls along the property line of the residences determined to meet the criteria to receive the soundwall to abate future traffic noise from the freeway. The residents whose soundwall would be constructed next to their property lines had an opportunity to vote for or against the soundwalls before the plan was finalized.

During project operation, the proposed project would neither add capacity nor generate additional vehicle miles traveled (VMT) beyond the existing (no action) condition; therefore, it would not cause substantial air quality impacts either on the local or regional basis.

Based on the above information, operation of the Build Alternative would not cause disproportionately high adverse effects on minority and/or low-income populations living closer to the construction zone per EO 12898 regarding environmental justice.

2.5.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No mitigation is required.

Build Alternative

Construction

Implementation of the TMP and public outreach program, as described in Section 2.3.4, would minimize impacts from construction activities to residents living within the vicinity of the project area.

The construction contractor would be required to comply with and adhere to all applicable rules and regulations set forth by the South Coast Air Quality Management District (SCAQMD) to minimize air quality impacts. In addition, the LAHD has developed the sustainable construction guidelines to be implemented by all construction projects sponsored by the LAHD to reduce air emissions (see Attachment A to Appendix B). With the implementation of standard minimization measures and adherence to the LAHD sustainable construction guidelines for reducing air emissions, air quality impacts during project construction would not be substantial.

Permanent

The proposed project would not contribute to noise impacts to residences located near the project site; therefore, no mitigation from the proposed project would be required. Because the ambient noise levels of these residential areas have approached or exceeded the noise abatement criteria for residences due to traffic operation, construction of soundwalls for these residences would minimize future traffic noise from the freeway.

Pertaining to air quality impacts, with the implementation of standard minimization measures and adherence to the LAHD sustainable construction guidelines for reducing air emissions, which would be incorporated into project design specifications, no other mitigation is required.



2.6 Utilities and Emergency Services

This section addresses potential impacts to public utilities and emergency services that would result from construction and operation of the proposed project. Public utilities include electricity, natural gas, water and wastewater facilities, storm drains, telecommunications, oil pipelines, and solid waste disposal. Emergency services include law enforcement, fire protection, and ambulance service. For each of the utilities and service systems discussed, existing infrastructure, levels of service, and capacity are described.

2.6.1 Affected Environment

The study area for the utilities and emergency services impact assessment includes the area generally bounded by PM 2.02 on NB I-110 to the north, SR 47 to the south, John S. Gibson Boulevard to the east, and Gaffey Street to the west.

2.6.1.1 Utilities

Electricity

The Los Angeles Department of Water and Power (LADWP) supplies electricity to the study area. LADWP owns and operates several overhead and underground transmission and distribution lines in the project area. Underground electrical conduits exist in the MacArthur Avenue Overcrossing I-110; multiple conduits exist in Channel Street; and two conduits exist in John S. Gibson Boulevard, one on either side of the street. An underground conduit enters the Port of Los Angeles at the Gibson Gate/NB I-110 ramps intersection.

Natural Gas

The Southern California Gas Company supplies natural gas to the project area. There are 2-inch gas lines within the residential neighborhoods bound by SR 47 on the south, Pacific Avenue on the east and north, and I-110 on the west. These streets include MacArthur, Upland, Elberon, Grand, and Summerland avenues.

A 13-inch gas line is located in Pacific Avenue under SR 47. South of Channel Street, Pacific Avenue contains an abandoned 10-inch gas line and an active 11-inch gas line. Channel Street contains a 16-inch gas line that turns north along John S. Gibson Boulevard and continues through the project area.

Water

LADWP provides domestic water to the project area. There are 6-inch water lines within the residential neighborhoods bounded by SR 47 to the south, Pacific Avenue to the east and north, and I-110 on the west. These streets include MacArthur, Upland, Elberon, Grand, and

Summerland avenues. Grand Avenue, north of MacArthur Avenue, contains a 4-inch water line. The MacArthur Avenue Overcrossing I-110 contains an 8-inch water line with a 12-inch steel casing.

Under SR 47, Pacific Avenue contains an abandoned 20-inch water line. This abandoned water line has been replaced with an active 30-inch water line. These two lines continue north to Channel Street, where the active line joins a 36-inch line. The 30-inch water line continues north on John S. Gibson Boulevard through the project area. A 12-inch water line branches off of this 30-inch line and enters the Port of Los Angeles just north of the Gibson Gate/NB I-110 ramps intersection.

All of the water lines contain water service laterals, meters, fire hydrants, and other appurtenances, which is typical for water distribution systems. There is no reclaimed water system in the project area.

Storm Drains

The City of Los Angeles owns and operates the storm drain system within City ROW, and Caltrans owns and operates storm drains within State ROW.

A 69-inch reinforced concrete pipe (RCP) and an abandoned 66-inch RCP cross under SR 47 west of Pacific Avenue. An 18-inch RCP and inlets located along the SB SR 47 to NB I-110 connector pick up drainage in the vicinity and drain to Pacific Avenue under SR 47.

A series of 18-inch to 24-inch storm drain lines and inlets cross I-110 south of MacArthur Avenue. A 36-inch storm drain line takes this runoff north along the SB I-110 right shoulder, where another set of inlets and lines connect to it near the Miraflores ramps. This 36-inch line then turns east under I-110 and Pacific Avenue south of Channel Street, where it joins an 8-foot by 7-foot concrete box culvert in Channel Street. The box culvert enters the Port and drains to the harbor.

An additional drainage system exists north of Channel Street along I-110 and the NB John S. Gibson Boulevard ramps. An 18-inch slotted corrugated metal pipe (CMP) median drain exists in the median of I-110. Connecting pipes within inlets are mostly 18-inch to 24-inch RCP. This system crosses John S. Gibson Boulevard south of the John S. Gibson Boulevard ramps, enters the Port property, and drains to the harbor.

Wastewater

The area's sewer agency/provider is the City of Los Angeles, Bureau of Sanitation. There are 8-inch sewer lines in the residential neighborhoods bounded by SR 47 on the south, Pacific

Avenue on the east and north, and I-110 on the west. These streets include MacArthur, Upland, Elberon, Grand, and Summerland avenues.

Pacific Avenue under SR 47 contains an 18-inch sewer line that flows north. North of SR 47, where west Upland Avenue joins, the one line branches into three lines (two 8-inch lines and one 12-inch line). In Channel Street, three abandoned sewer lines exist under I-110. A 42-inch sewer line also exists that extends south along Pacific Avenue. Two sewer lines are located in John S. Gibson Boulevard at the project site. One line varies from 6 inches to 8 inches, and the other varies from a 36-inch line to double 24-inch lines.

All of the sewer lines contain sewer laterals and manholes, which is typical for sewer systems.

Telephone, Cable, and Fiber Optics

Multiple telephone, cable, and fiber-optic lines are located in the study area. Time Warner Cable and AT&T have underground telephone and cable conduits throughout the project area. Both companies have underground conduits within State ROW along I-110 that cross under the freeway and run along the shoulder, providing service to Emergency Call Boxes located along the I-110 mainline within the project limits. Two conduits cross the MacArthur Avenue/I-110 overcrossing. Three underground conduits exist in Pacific Avenue under SR 47, two underground conduits exist in Channel Street, and three underground conduits exist in John S. Gibson Boulevard.

Solid Waste

Regional planning for solid waste facilities in the area is under the jurisdiction of Los Angeles County, which is the local enforcement agency under integrated waste management laws. The Los Angeles County Sanitation District oversees the operation of landfills that would accept solid waste generated during construction of the proposed project. The County encourages source reduction and recycling objectives that meet or exceed the requirements of State Assembly Bill (AB) 939. AB 939 mandates a 50 percent reduction in waste volumes from 1990 levels by 2010. Nonhazardous and hazardous waste can be landfilled or recycled at several facilities throughout the state. Any hazardous waste generated within the project area is managed in accordance with federal and state requirements. The nearest landfill to the proposed project location is Puente Hills Landfill, which is located at 13130 Crossroads Parkway South in the City of Industry. The newly opened Puente Hills Material Recovery Facility could be used for material recycling purposes.

Oil Lines

Several active and abandoned oil lines exist in the project area. Owners of the oil lines include:

- Chevron
- Conoco Phillips
- ExxonMobil Pipeline Company
- Kinder Morgan Energy Partners
- United States Navy

Pacific Avenue under SR 47 contains an abandoned 8-inch oil line. Pacific Avenue south of Channel Street contains three active U.S. Navy lines. Three abandoned lines of various sizes cross under I-110 at the Miraflores Avenue SB ramps. Channel Street contains four active U.S. Navy oil lines of various sizes.

The Pacific Harbor Line Railroad that crosses under I-110 at the Channel Street Overhead contains 11 oil lines within its ROW; some of these are active and most are abandoned. The active lines are owned by Kinder Morgan and the US Navy. The abandoned lines are owned by Chevron.

John S. Gibson Boulevard contains six abandoned oil lines through most of the project limits. An active 14-inch Kinder Morgan oil line crosses under I-110 south of the John S. Gibson Boulevard ramps.

2.6.1.2 Railroads

The Pacific Harbor Line Railroad contains one railroad track within a 60-foot-wide ROW and travels under I-110 at the Channel Street Overhead within the project limits. Cargo trains currently use the track once or twice per day during non-peak traffic hours. During non-winter months, one train, consisting of one locomotive and four railcars, delivers liquefied petroleum gas (LPG) to one customer north on Gaffey Street. The full cars are unloaded, and empty cars are picked up to be taken back to the Port. The train returns to the Port approximately 30 to 45 minutes later. During the winter months, when LPG demand is higher, the train makes two trips per day – one during the day and one at night; however, there is no set schedule for the deliveries.³

³ Parsons, 2009. Personal communication between Angela Schnapp (Parsons) and Don Norton (Pacific Harbor Line, Inc.). June 25.

Several other railroad lines exist within the Port of Los Angeles property behind the Gibson Gate at the intersection of John S. Gibson Boulevard and the NB ramps; however, these lines are outside of the project site footprint.

2.6.1.3 Emergency Services

The project study area is under the jurisdiction of the Los Angeles Police Department (LAPD) Harbor Division Area, which patrols a 27.5-square-mile area, including Harbor City, Harbor Gateway, San Pedro, Wilmington, and Terminal Island.

The Los Angeles Fire Department (LAFD) provides fire protection and other emergency services throughout the project area.

Table 2.6-1 lists the locations of the police and fire stations serving the project area.

**Table 2.6-1
Emergency Response Providers in the Project Study Area**

Emergency Provider	Location
Los Angeles Police Harbor Community Station	2175 John S. Gibson Boulevard, San Pedro, CA 90731
Los Angeles Fire Station #36	1005 N. Gaffey Street, San Pedro, CA 90731
Los Angeles Fire Station #48	1601 S. Grand Avenue, San Pedro, CA 90731
Los Angeles Fire Station #49	400 Yacht Street, Wilmington, CA 90744
Los Angeles Fire Station #112	444 S. Harbor Boulevard, Berth 86, San Pedro, CA 90731

2.6.2 Environmental Consequences

2.6.2.1 Construction Impacts

No Build Alternative

Under this alternative, there would be no construction activities on I-110, SR 47, or any of the associated ramps or connectors; therefore, there would be no temporary impacts to utilities, emergency services, or the railroad within the project study area.

Build Alternative

Utilities

Construction of the Build Alternative could result in temporary impacts to utilities, such as an increase in utility demand and solid waste volume. Construction activities would utilize machinery and tools that require more electrical power consumption than is currently used for the local streets and affected properties. This increase in electrical usage would be temporary, and the contractor would be able to tap into the existing power grid or would generate power onsite. Construction activities would not cause a substantial increase in the existing demand for electricity or require the development of new sources.

No major utility relocations would be involved with the Build Alternative. Normal utility adjustments would be required, such as relocating utility appurtenances (e.g., electrical and cable pull boxes, signal poles, and equipment) behind the new curb returns at the west side of the John S. Gibson Boulevard/NB I-110 ramps intersection. The power pole at the corner between John S. Gibson Boulevard and the on-ramp would be relocated. Existing underground pipelines would remain in their current locations. A telephone cable along the on-ramp may need to be relocated upon potholing verification.

Emergency Services

Construction of the Build Alternative would require some traffic lane closures. During the construction period, delays in emergency response time could occur due to roadway obstruction and partial roadway closure. A Traffic Management Plan (TMP) would be prepared by the contractor to identify roadway closures and detour routes within the affected area during construction. All of the affected emergency routes would be identified in the TMP. The approved TMP, along with construction schedules, would be made available to the LAPD and LAFD. All residents, businesses, and organizations within the affected area would also be notified in advance of the construction schedules, roadway closures, and detour routes as a safety precaution. The approved TMP would be strictly implemented during each phase of the project to avoid adverse impacts to emergency services within the area.

Railroads

To accommodate the I-110 Channel Street Overhead widening, approximately 575 feet of the Pacific Harbor Line Railroad track under the freeway would have to be relocated laterally by 20 feet. The realignment would take place entirely within the existing railroad ROW. Disruption to the railroad operations would last approximately 3 months. A written construction agreement would be entered into with the Pacific Harbor Line Railroad Company. The Port would closely coordinate with the Pacific Harbor Line Railroad Company to work on the railroad during the period when the railroad is not in operation and to avoid track closures to minimize the impacts to railroad operations.

In addition, the California Public Utilities Code requires approval from the Public Utilities Commission (PUC) for construction or alteration of crossings, and it grants the PUC exclusive power on design, alteration, and closure of crossings. A request of authorization must be submitted to the Rail Crossing Engineering Section (RCES). The design criteria of the proposed project must comply with the PUC General Orders (GOs), such as GO 26-D: "Clearance on railroads and street railroads as to side and overhead structures, parallel tracks, and crossings."

Several idle oil lines and once active oil lines exist within the portion of the Pacific Harbor Line Railroad ROW where the railroad track would be realigned. The active oil line, owned by the US Navy, would be encased in concrete under the railroad track.

2.6.2.2 Permanent Impacts

No Build Alternative

No direct impacts to utilities, emergency services, or the railroad would occur within the study area under the No Build Alternative.

Build Alternative

Utilities

Operation of the Build Alternative would not require a substantial increase in utility usage. No permanent impacts would occur.

Emergency Services

No fire or police facilities would be displaced for construction of the proposed project. The proposed project is not growth inducing; therefore, it would not create a need for additional fire and police protection facilities. No permanent adverse impacts to fire and police protection would occur.

Railroads

Once the railroad track is realigned, there would be no impacts to railroad operations.

2.6.3 Avoidance, Minimization, and Mitigation Measures

2.6.3.1 No Build Alternative

No mitigation is required under this alternative.

2.6.3.2 Build Alternative

Construction

The proposed project would be designed to avoid adverse effects to existing service utilities, emergency services, and railroad operations.

MM U&ES-1 The LAHD shall work in close coordination with the utility service providers in advance of construction activities to relocate affected utilities to minimize the impacts to the consumers.

MM U&ES-2 The LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community similar to MM LU-1.

Permanent

No avoidance, minimization, and mitigation measures are required.



2.7 Traffic and Transportation/Pedestrian and Bicycle Facilities

This section addresses potential impacts to vehicular traffic and circulation associated with implementation of the proposed project.

2.7.1 Regulatory Setting

Caltrans, as assigned by 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 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.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.7.2 Affected Environment

Existing Traffic Conditions

The information in this section is taken from the Traffic Analysis Report, dated December 2009, prepared by Iteris, Inc.

The study area consists of one intersection at the John S. Gibson Boulevard/NB I-110 ramps/Gibson Gate. This intersection is signalized. Existing peak hour traffic volume during the 2009 traffic count is shown in Figure 2.7-1.

Traffic conditions were analyzed in the study area. Congestion levels were based on Level of Service (LOS) ratings, Annual Average Daily Traffic (AADT) volumes, and AM/PM peak-hour traffic volumes.

LOS is a measure of the quality of traffic flow and can denote any of an infinite number of combinations of traffic operating conditions that may occur on a given travel lane or at a given intersection when it is subjected to various traffic volumes. Table 2.7-1 presents the LOS definitions for signalized intersections. There are six levels of service, A through F, which relate to traffic congestion from best to worst, respectively. In general, Level A represents free-flow conditions with no congestion, whereas Level F represents severe congestion with stop-and-go conditions. Levels E and F typically are considered unsatisfactory. Corresponding to each intersection LOS shown in Table 2.7-1 is an average vehicular delay that is estimated by the HCM method for signalized intersections. This value indicates the amount of delay, expressed in seconds, that the average motorist at the intersection is expected to experience at a signalized intersection.

**Table 2.7-1
Signalized Intersection Level of Service and Delay**

LOS	Interpretation	Average Delay (seconds)
A	Uncongested operations; all vehicles clear in a single cycle.	0.0-10.0
B	Uncongested operations; all vehicles clear in a single cycle.	10.1-20.0
C	Light congestion; occasional backups on critical approaches.	20.1-35.0
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	35.1-55.0
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	55.1-80.0
F	Total breakdown with stop-and-go operations.	>80.0

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Traffic Forecast

Traffic forecasts for the study area were developed for the baseline year (2009) with project for the purpose of CEQA impact analysis, and the opening year (2014) and design year (2035) under both –Build” and –No Build” conditions, for the purpose of NEPA impact analysis. No Build traffic volumes for the freeway segments and intersections within the study area were developed using the methodology described in the –Traffic Model Development, Calibration and Validation of Port Area Travel Demand Model” section of the Traffic Analysis Report prepared for this project. Table 2.7-2 shows Year 2009 and predicted years 2014 and 2035 peak-hour traffic volumes under the –No Build” condition within the study area.

**Table 2.7-2
Traffic Volumes for Baseline Year 2009, Opening Year (2014)
and Design Year (2035) Under No Build Condition**

Location	2009 (Existing)		2014 Projection (No Build)		2035 Projection (No Build)	
	A.M. Peak- Hour Volume	P.M. Peak- Hour Volume	A.M. Peak- Hour Volume	P.M. Peak- Hour Volume	A.M. Peak- Hour Volume	P.M. Peak- Hour Volume
SB SR 47 between Front Street on-ramp and Connector (weaving area)	1,978	2,430	3,054	2,599	3,252	3,612
NB I-110 between Connector and John S. Gibson Boulevard off-ramp (weaving area)	3,605	2,552	3,609	2,835	3,811	3,728
NB I-110 off-ramp to John S. Gibson Boulevard	63	44	105	158	137	290
NB I-110 at John S. Gibson Boulevard	3,542	2,508	3,504	2,676	3,674	3,438
NB on-ramp to I-110 from John S. Gibson Boulevard	1,001	480	1,647	1,489	1,943	1,677
NB I-110 north of on-ramp at John S. Gibson Boulevard	4,544	2,989	5,151	4,165	5,617	5,115

Source: Traffic Analysis Report, Iteris, 2009.

Congestion levels were analyzed using the LOS procedures presented in the Highway Capacity Manual – 2000 Edition (HCM). Table 2.7-3 shows the peak-hour LOS for the John S. Gibson Boulevard intersection in the existing year (2009), opening year (2014), and design year (2035). The LOS for the existing condition shows the roadway system is operating within acceptable levels. The intersection is forecast to operate at LOS D under the No Build Alternative during both the morning and afternoon peak hours in year 2035.

**Table 2.7-3
Existing and Future No Build Years Forecast Study Intersection LOS AM and (PM)**

Intersection	Existing (2009)	Future No Build (2014)	Future No Build (2035)
John S. Gibson Boulevard and I-110 NB Off-Ramp/ Yang Ming Driveway	C(B)	C(C)	D(D)

Source: Traffic Analysis Report, Iteris, 2009.

Table 2.7-4 shows that on-ramp freeway mainline merges at LOS B in the morning and LOS A in the afternoon peak hours under the existing conditions. In Year 2035, the NB I-110 on-ramp freeway mainline merges at LOS E in the morning and LOS D in the afternoon peak hours. The SB SR 47 west of Harbor Boulevard on-ramp LOS remains the same for both the existing condition and the Year 2035 No Build condition, which is LOS B in the morning peak hours and LOS C in the afternoon peak hours. The NB I-110 between the on- and off-ramps and the NB

I-110 north of John S. Gibson Boulevard on-ramp both have LOS C in the morning peak hours and LOS B in the afternoon peak hours for the existing condition and LOS C for both the morning and afternoon peak-hour conditions for Year 2035. While the LOS for the afternoon peak-hour conditions worsens from LOS B to LOS C for Year 2035, LOS C is still considered an acceptable LOS condition.

**Table 2.7-4
Traffic Forecast for Study Intersection, Freeway Ramp and Mainline LOS
AM and (PM) Peak Hours Under No Build Condition**

Freeway Ramp and Mainline Segment	2009 (Existing)	2014	2035
John S. Gibson Boulevard and I-110 NB Off-Ramp/ Yang Ming Driveway	B(B)	C(C)	D(D)
NB John S. Gibson Boulevard On-Ramp I-110 (merge)	B(A)	D(C)	E(D)
SB SR 47 West of Harbor Boulevard On-Ramp	B(C)	C(C)	B(C)
NB I-110 between Off- and On-Ramp	C(B)	C(B)	C(C)
NB I-110 North of John S. Gibson Boulevard On-Ramp	C(B)	C(B)	C(C)

Source: Traffic Analysis Report, Iteris, 2009.

Table 2.7-5 shows the result of LOS projections at study intersection, ramp, mainline and weave during AM and PM peak hours for year 2009, 2014, and 2035 under the Build condition.

Nonmotorized and Pedestrian Features

The east side of John S. Gibson Boulevard has a 10-foot-wide concrete walkway behind the curb. The west side of the street has concrete sidewalk north of the LAPD Harbor Division Station driveway and south of Channel Street. As part of this project, the missing gap in sidewalk would be installed on the west side of John S. Gibson Boulevard from the LAPD southern driveway to Channel Street.

John S. Gibson Boulevard provides bike lanes in both the SB and NB directions; however, there is no NB striped bike lane between the John S. Gibson Boulevard/NB I-110 ramps intersection and the John S. Gibson Boulevard/Channel Street intersection. As part of this project, a bike lane would be striped for the NB direction between this intersection and the John S. Gibson Boulevard/Channel Street intersection.

Three of the four legs of the John S. Gibson Boulevard/NB ramp signalized intersection have pedestrian crossings. No pedestrian crossing is provided for John S. Gibson Boulevard at the south side. All four corners have handicap-accessible curb ramps. The curb ramps at the west side of the intersection would be reconstructed as this intersection is being improved.

**Table 2.7-5
Traffic Forecast for Study Intersection, Ramp, Mainline,
and Weave LOS for AM and (PM) Peak Hours Under Build Condition**

Roadway	Year 2009		Year 2014		Year 2035	
	No Build	Build	No Build	Build	No Build	Build
John S. Gibson Boulevard and I-110 NB Off-Ramp/Yang Ming Driveway	C(B)	B(B)	C(C)	C(C)	D(D)	D(D)
NB John S. Gibson Boulevard On-Ramp I-110 (merge)	B(A)	B(A)	D(C)	D(C)	E(D)	D(D)
SB SR 47 East of Harbor Boulevard On-Ramp	B(C)	B(C)	C(C)	C(C)	B(C)	B(C)
NB I-110 Between Off- and On-Ramp	C(B)	C(B)	C(B)	C(B)	C(C)	C(C)
NB I-110 North of John S. Gibson Boulevard On-Ramp	C(B)	C(B)	C(B)	C(B)	C(C)	C(C)
SB SR 47 Weaving between Harbor Boulevard On-Ramp and I-110 Connector	B(C)	B(B)	D(C)	C(B)	D(E)	C(C)
NB I-110 between Weaving Segment between SR 47 Connector and John S. Gibson Boulevard Off-Ramp	C(B)	B(B)	C(B)	C(B)	D(D)	C(C)

Source: Traffic Analysis Report, Iteris, 2009.

2.7.3 Environmental Consequences

2.7.3.1 Construction Impacts

No Build Alternative

Under the No Build Alternative, no construction activities would occur; therefore, there would be no construction impacts on traffic deriving from the proposed project.

Build Alternative

The Build Alternative would involve more than a year of construction. During project construction, area residents may occasionally experience some inconvenience due to construction equipment and material obstruction of the local streets, pedestrian walkways, and bike lanes. A temporary construction easement (TCE) would be required from the front row of residential properties east, west, and south of the SR 47/I-110 interchange for construction of soundwalls and retaining walls; however, an access obstruction in and out of the residential homes adjacent to the construction zone is not anticipated. The traffic impacts would be minimized by providing traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes, and temporary traffic signal during construction.

During project construction, there could be temporary construction impacts affecting fire protection agencies, law enforcement agencies, and emergency services. The public facility that might be affected by the construction activities would be the Harbor Police Station as a result of NB I-110 on-ramp widening and John S. Gibson Boulevard widening. The impacts would be from traffic delay from construction equipment operation and a partial lane closure on an occasional basis. The impacts can be minimized by implementation of the Traffic Management Plan (TMP) to be developed and implemented by the LAHD through its construction contractor, as described in Section 2.2.3 (MM LU-1) and Section 2.3.4 (MM CCC-1 and MM CCC-2).

2.7.3.2 Operational Impacts

No Build Alternative

The traffic volume for the SB SR 47 to NB I-110 Connector is expected to increase and exceed the current limit for a single-lane connector. As a result, the SB SR 47 mainline will experience backup. Currently, traffic from the on-ramp at Front Street enters SB SR 47 at a relatively slow speed compared to traffic on SR 47 heading SB from the Vincent Thomas Bridge. The weaving distance between the merge point of the on-ramp and the split of the NB I-110 and SB SR 47 freeways is approximately 720 feet in length. This short weaving distance creates an operational deficiency, requiring traffic heading SB on SR 47 to suddenly slow down to allow slow-moving on-ramp traffic the opportunity to merge with traffic on the connector. With the expected traffic demand in the future, this operational deficiency is expected to worsen without operational improvements.

Based on the traffic volume forecast, the peak-hour LOS for the John S. Gibson Boulevard intersection would worsen from LOS B in the morning and afternoon to LOS D in the morning and afternoon (see Table 1-3 in Chapter 1). In addition, the NB John S. Gibson Boulevard on-ramp freeway mainline merges at LOS B in the morning and LOS A in the afternoon peak hours under the existing conditions. In Year 2035, the NB I-110 on-ramp freeway mainline is predicted to merge at LOS E in the morning and LOS D in the afternoon peak hours.

Build Alternative

The proposed project is an operational improvement project and is not forecasted to increase traffic volumes. A traffic study was conducted to study traffic conditions with implementation of the Build Alternative. Based on the new lane configurations under the proposed improvements, the LOS of NB John S. Gibson Boulevard/I-110 (merge) on-ramp would improve from E to D during the AM peak hours; the LOS of the SB SR 46 Weaving between Harbor Boulevard on-ramp and I-110 Connector would improve from D to C during the AM peak hours and from E to C during the PM peak hours; and the LOS of the NB I-110 between Weaving Segment between SR 47 Connector and John S. Gibson Boulevard Off-Ramp would improve from D to C during

the AM peak hours and from D to C during the PM peak hours. The LOS of the remaining intersections would remain the same. Table 2.7-5 summarizes the traffic forecast at various study intersections and segments within the project area.

Impacts to Existing Transportation System

The proposed project would improve traffic conditions by improving circulation of vehicles on roadways within the project limits.

Impacts to Pedestrian Safety

The pedestrian sidewalks for this project would be either maintained or improved to meet ADA requirements. Sidewalks are provided along both sides of John S. Gibson Boulevard. In addition, throughout the project, all curb ramps would be upgraded to meet current ADA requirements. No impact to pedestrian safety is anticipated.

Impacts to Parking

Street parking is not currently permitted along John S. Gibson Boulevard within the project limits, and this will not be changed by the proposed project. The project is limited to roadway improvements; therefore, it would not result in any increase in demand for street parking.

2.7.4 Avoidance, Minimization, and Mitigation Measures

Construction

A Traffic Management Plan (TMP) would be prepared and implemented to minimize impacts to traffic and pedestrian safety during project construction.

MM Traffic-1 The LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the City of Los Angeles Department of Transportation and Caltrans, and it shall be provided with the construction plan to the City of Los Angeles Police and Fire Departments prior to commencement of construction activities. The TMP shall include, but is not limited to, the following implementation plans:

- **Public Information:** Provide project update to affected residents and businesses, including general public, via brochures and mailers, community meeting, and Web site.
- **Motorist Information:** Provide project information using changeable message signs and ground-mounted signs.

- Incident Management: Implement Construction Zone Enhanced Enforcement Program (COZEEP), freeway service patrol, and California Highway Patrol (CHP) traffic handling.
- Traffic Management during Construction: Provide traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes, and temporary traffic signal during construction.

Permanent

No avoidance, minimization, and mitigation measures are required.



2.8 Visual/Aesthetics

This section addresses potential visual and aesthetic impacts associated with the proposed project based on the results of the visual impact assessment. The visual analysis was prepared consistent with methodologies established by FHWA's *Visual Impact Assessment for Highway Projects*. This methodology divides the views into landscape or character units that have distinct, but not necessarily homogenous, visual appearance. Typical views, called key viewpoints, are selected for each unit to represent the views to/from the project. The view of the motorist is also considered as a separate character unit.

Existing and proposed visual quality, both from specific viewpoints, as well as for general landscape units, is evaluated based on three criteria – vividness, intactness, and unity:

- **Vividness:** The memorability of the components of a view as they combine to form striking or distinctive patterns in the landscape. This can include the prominence of a structure or feature as viewed against other elements, or the interplay of the different elements that create a striking view.
- **Intactness:** The integrity of visual order in the view and its freedom from visual encroachment. Both natural and man-made environments may be encroached upon by elements that detract from the overall composition of the view. The removal of elements may also have the same effect.
- **Unity:** The visual coherence and composition of the landscape viewed to form a harmonious visual pattern. Manmade environments with no visual relation to natural landform or landcover patterns display a lack of unity.

2.8.1 Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings (42 U.S.C. 4331[b][2]; emphasis added). To further emphasize this point, FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions regarding projects are made in the best overall public interest, taking into account adverse environmental impacts including, among others, the destruction or disruption of aesthetic values.

Likewise, 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.” (PRC Section 21001[b]; emphasis added).

2.8.2 Affected Environment

The project is located in an urbanized residential and industrial area within the south Los Angeles community of San Pedro and is adjacent to the Port of Los Angeles.

2.8.2.1 Setting

The project setting is within a highly urbanized area within the City of Los Angeles. Residential areas are situated above the adjacent depressed section of I-110. SR 47, on the south edge of the project limits, is at the elevation of the adjacent residential area, and the connecting ramp drops down to meet I-110. The existing MacArthur Avenue Overcrossing, which would remain untouched by the proposed project, provides views into the I-110 corridor for pedestrians on the bridge. Along John S. Gibson Boulevard, there are spot views to the freeway corridor, primarily at the existing off-/on-ramp.

Another major presence in the area is the Vincent Thomas Bridge, which is located to the east of the project area. It is a major landmark located just outside the proposed study area and within the viewshed of the proposed project area. This 1,500-foot-long suspension bridge is an extension of SR 47.

Most of the vegetated areas within the study area consist of ornamental plantings associated with the residential areas or along SR 47 and I-110. Within the freeway corridors, the slopes are planted with ice plant (*Carpobrotus* sp.), Eucalyptus, and palm tree species.

2.8.2.2 Viewshed and Viewer Sensitivity

A viewshed is the area normally visible from an observer's viewpoint location, including the screening effects of any vegetation or structures. Limits of a viewshed are defined as the visual limits of the views to or from the proposed project. The viewshed includes the locations of viewers likely to be affected by visual changes brought about by the project features. For this project, the viewshed includes the portions of the city that have views to the bridge. The area of this viewshed is highly dependent on the topography of adjacent areas, as well as the height of the buildings, with high rises having potential views even though they are some distance from the project site.

The sensitivities of different types of viewers vary depending upon their activity and their awareness of and familiarity with the surrounding environment. The following describes the comparative sensitivity of the various types of viewers in decreasing order of sensitivity.

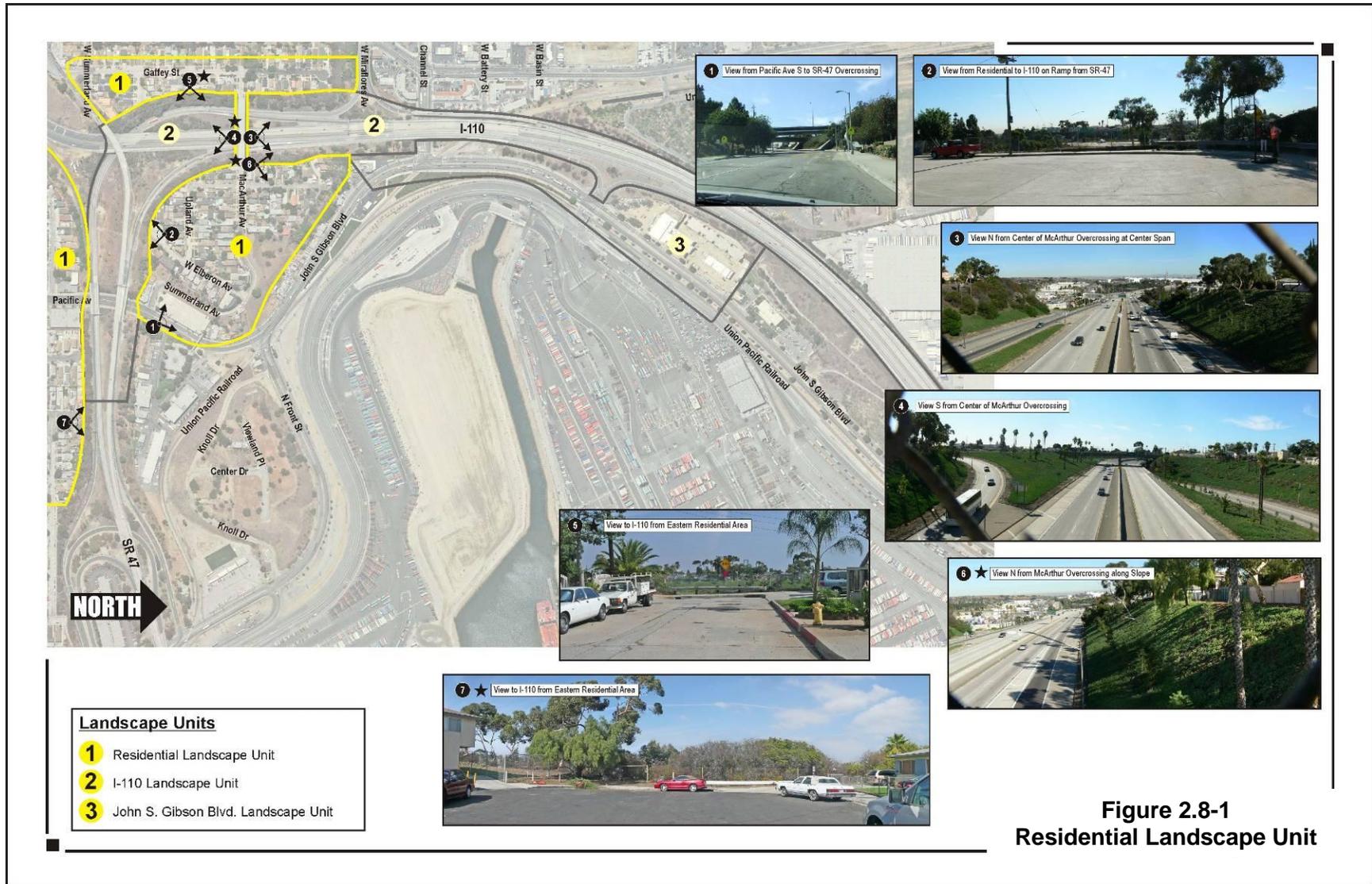
- **Residents:** Residents, particularly those with views of the project from their homes, would be most sensitive to change because of the relative permanency of their viewing experience.

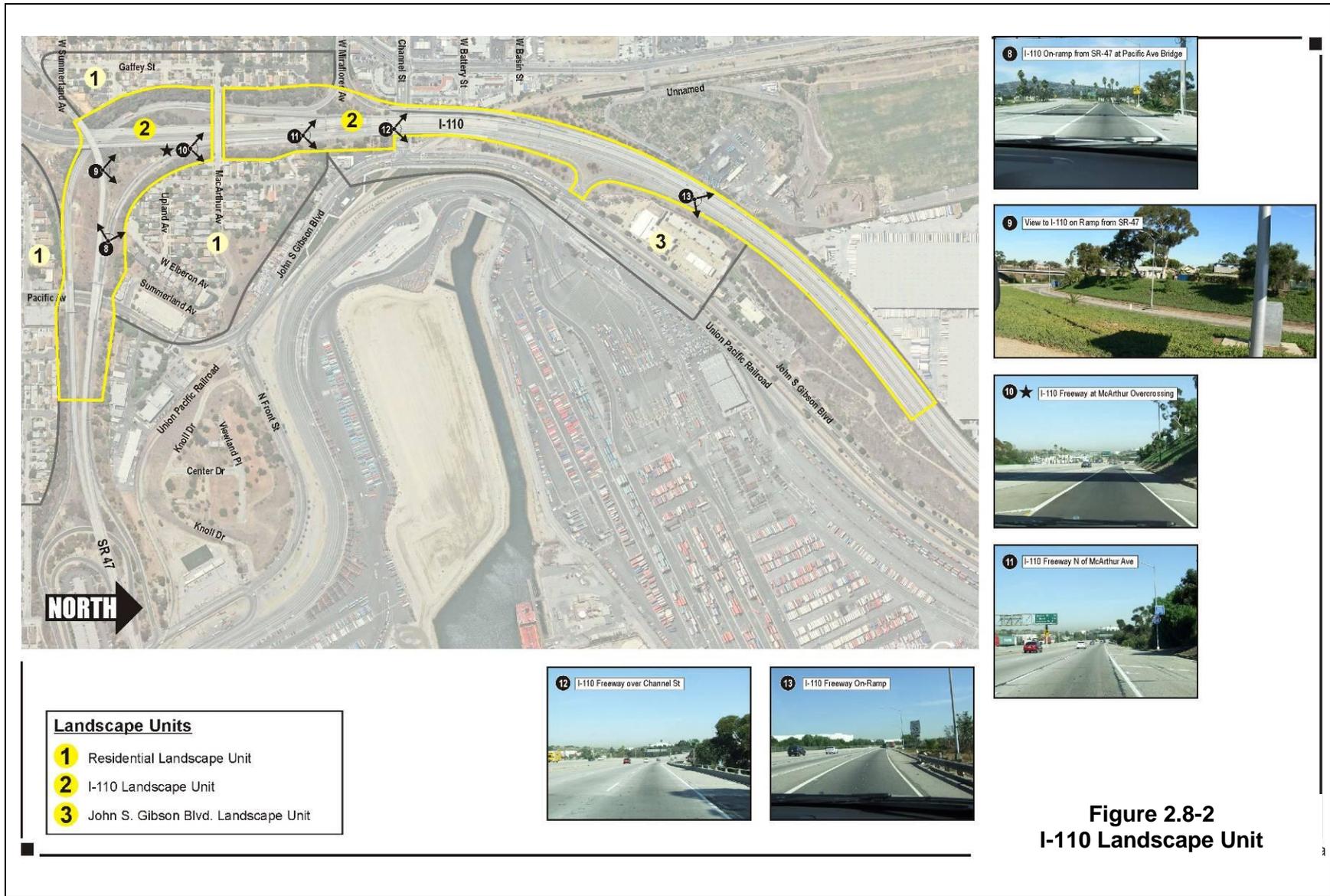
- **Business Owners, Employees, and Customers:** Business owners, employees, and customers of retail, industrial, and professional establishments within the project area would be considered sensitive viewers because they have frequent opportunities to experience the views from their workplaces and routinely visit on-street activity areas. These views can be fleeting or lengthy in duration.
- **Pedestrians:** Pedestrians, both on the bridge or on a street with views to the bridge, would be considered sensitive viewers, because they would be directly within the viewshed and would have lengthy exposure to views.
- **Regular Motorists:** Regular motorists would be those who live in the community or who commute through the corridor on a regular basis and are familiar with the surrounding views; however, their sensitivity to these views would be less than that of a pedestrian, because their passage through the project area is quicker and their attention is focused on road conditions.
- **Occasional Motorists:** Occasional motorists are typically nonresident, noncommuter tourists. Tourists would most likely be heading west toward downtown after exiting I-110. They would only have views of the project area from the roadway.

2.8.2.3 Visual Resources and Visual Quality at Key Viewpoints

The SR 47/I-110 Connector study area can be divided into three landscape units, which are described below, and can be seen in Figures 2.8-1 through 2.8-3. The Residential Landscape Unit is bisected by I-110, the I-110 Landscape Unit is adjacent to SR 47 and I-110, and the John S. Gibson Boulevard Landscape Unit is located between I-110 and John S. Gibson Boulevard.

- **Residential Landscape Unit:** This landscape unit is found east and west of I-110 and is centered on, and includes, the MacArthur Avenue bridge crossing over I-110. In addition there is a residential area along the south side of SR 47. The area is comprised of single-family residences. Private yards and street trees are the only vegetation; and there are no public open spaces.
- **I-110 Landscape Unit:** The I-110 Landscape Unit is comprised of the freeway ROW area through the project for both I-110 and the SR 47 ramp areas. Also included in the landscape unit are the on- and off-ramps to John S. Gibson Boulevard. The unit consists of paved areas associated with the roadways and adjacent landscaping.
- **John S. Gibson Boulevard Landscape Unit:** This landscape unit addresses the streetscape along John S. Gibson Boulevard, including the street and sidewalk paving, and adjacent buildings. The existing roadway cross section includes six through lanes, and within this unit, the City recently constructed a new police station with associated parking and ornamental plantings. In general, John S. Gibson Boulevard sits lower in the landscape than the nearby freeway.





**Figure 2.8-2
I-110 Landscape Unit**



Key viewpoints of the visual resources were established within these landscape units. Key viewpoints were chosen based on the view experienced most frequently by a sensitive viewer group. This was done to determine the extent of visual effects on a resource or view resulting from the project based on the viewer's response to the change in visual quality. In addition to the landscape units, Figures 2.8-1 through 2.8-3 show the location and direction of the key viewpoints analyzed. The key viewpoints for the visual analysis are:

- **Key Viewpoint #4, Residential Landscape Unit (Figure 2.8-4):** This key viewpoint is located at the center of the MacArthur Avenue Overcrossing looking to the south. This viewpoint was selected because it shows the likely changes to SR 47 and the NB I-110 ramp from the view of pedestrians on the bridge.
- **Key Viewpoint #5, Residential Landscape Unit (Figure 2.8-5):** The photograph was taken from the entrance of the West Crestwood Avenue cul-de-sac that backs up to the I-110 ROW. The view is to the east toward the Port area. The view was selected because it shows the effects of the ramp widening and the associated sound and retaining walls from this neighborhood area.
- **Key Viewpoint #6, Residential Landscape Unit (Figure 2.8-6):** The photograph was taken from the MacArthur Avenue Overcrossing structure to the north from the east end of the overcrossing, which is nearest to the neighborhood. The view was selected because it shows the addition of the proposed soundwall associated with the Build Alternative.
- **Key Viewpoint #7, Residential Landscape Unit (Figure 2.8-7):** The photograph was taken from Harker Court looking to the north towards SR 47. The view was selected because it shows the addition of the proposed soundwall to this neighborhood associated with the Build Alternative.
- **Key Viewpoint #10, I-110 Freeway Landscape Unit (Figure 2.8-8):** The photograph is taken from the existing SR 47 to I-110 on-ramp. It was selected because it shows the effects of the proposed ramp widening and associated retaining wall to travelers on the ramp and along I-110.
- **Key Viewpoint #16, John S. Gibson Boulevard. Landscape Unit (Figure 2.8-9):** The photograph was taken from John S. Gibson Boulevard at the intersection with the I-110 off-/on-ramps. The view was selected as a key viewpoint because it shows the potential project effects along the boulevard.

2.8.3 Environmental Consequences

2.8.3.1 Construction Impacts

For purposes of this analysis, temporary impacts are defined as those impacts that would be in effect only during construction of the project elements. These impacts are only temporary and would cease on completion of construction.

No Build Alternative

No impacts to visual resources over the baseline condition would occur under the No Build Alternative.

Build Alternative

Active Construction: Construction activities generate visual and aesthetic images that are generally disruptive to the status quo and may be undesirable or offensive to some affected individuals or groups. The presence and operation of construction equipment, such as heavy trucks, cranes, or excavators, may be experienced as disruptive or out of context. Construction-generated fumes and dust generate visual, as well as air, quality impacts.

Construction Staging Areas: Three locations have been identified as candidates for use as construction staging areas. Impacts of the staging facilities would be considered low due to the small areas of these sites and their locations adjacent to transportation corridors and industrial uses. Overall, due to the temporary nature of these effects, they are not considered substantial.

There would also be some temporary clearing of existing vegetation along the SR 47 to I-110 freeway connector along the base of the slope for the retaining wall construction. In addition, some trees may have to be removed at the top of the slope to allow construction of the potential soundwall.

2.8.3.2 Permanent Impacts

The visual impact of project alternatives is determined by assessing the visual resource change due to the project and predicting viewer response to that change. Visual resource change is the total change in visual character and visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the existing visual character of the landscape. The second step is to compare the visual quality of the existing resources with the projected visual quality after the project is constructed. Viewer response to the changes is the sum of viewer exposure and viewer sensitivity to the project, as previously described. The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to react negatively to the change.

No Build Alternative

There would be no visual impact under the No Build Alternative because existing structures and views would be unchanged.

Build Alternative

Long-term impacts would include the newly constructed roadway pavement, retaining wall, and soundwall. New plantings, particularly new tree plantings, would take many years to reach

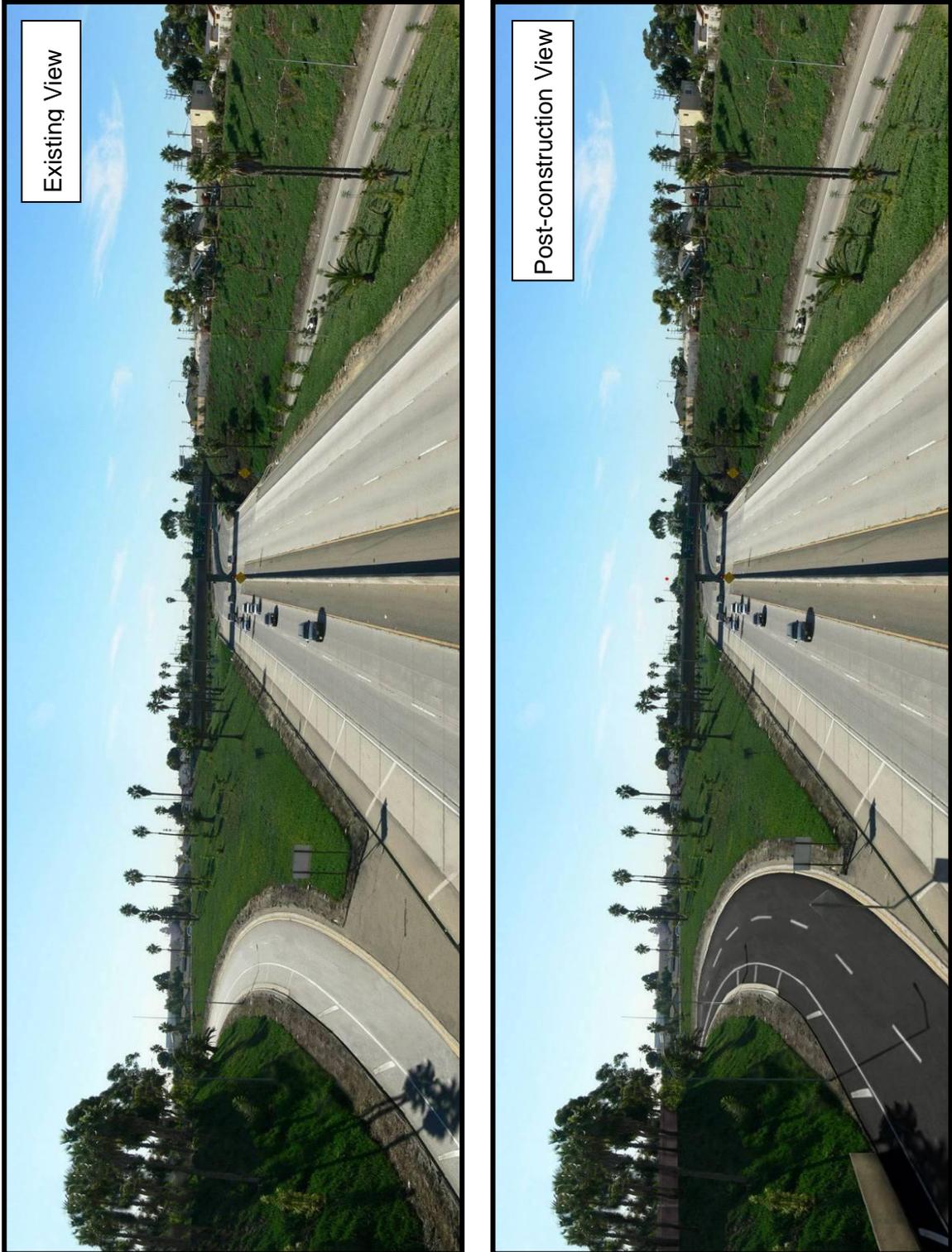
comparable size to the existing trees. Repair of the groundcover plantings would be anticipated to require only a few growing seasons to fill in and provide the uniform appearance of the existing slope. A summary of the existing visual character/quality, proposed project features, changes to visual character, anticipated viewer response, and resulting visual impacts on Key Viewpoints #4, #5, #6, #7, #10, and #16 as a result of the Build Alternative are described below. Tables 2.8-1 and 2.8-2 provide a summary of existing and proposed visual quality by Key Viewpoint.

Key Viewpoint #4, Residential Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-4.

- **Orientation:** The photograph is taken from the MacArthur Avenue bridge looking to the south along I-110. The view is from the perspective of the pedestrian on the bridge.
- **Existing Visual Character/Quality:** The view is into the I-110 freeway corridor, with the existing SR 47 connector ramp to the left. The overall visual quality of the view is moderate, with moderate vividness, intactness, and unity.
- **Proposed Project Features:** The proposed project features include the widened connector ramp section and associated retaining wall. In addition, the proposed soundwall can be seen at the top of the slope.
- **Changes to Visual Character:** The wider ramp and retaining wall, while noticeable, fit within what is anticipated for a freeway environment. From this vantage point, the changes appear minor. If the existing eucalyptus trees near the top of the slope can be preserved, the addition of the soundwall would be less noticeable due to the partial screening provided by the vegetation.
- **Anticipated Viewer Response:** It is anticipated that the pedestrian on the bridge would likely notice the changes to the visual environment; however, because these changes are generally slight to the scale of the freeway, the overall sensitivity to the change should be moderately low to low.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be small and would not alter the existing overall moderate visual quality.

**Figure 2.8-4 Key Viewpoint #4, Residential Landscape Unit
(with mitigation at 5 years post-completion)**



Key Viewpoint #5, Residential Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-5.

- **Orientation:** The photograph is taken to the northeast, across the cul-de-sac to the freeway right-of-way.
- **Existing Visual Character/Quality:** The view is to the I-110 freeway ROW from the neighborhood, with vegetation in the neighborhood to the west, across I-110 in the background. The overall visual quality of the view is moderate, with moderate vividness, intactness, and unity.
- **Proposed Project Features:** From this vantage point, the new soundwall proposed at the end of the cul-de-sac would block the current views into the freeway ROW.
- **Changes to Visual Character:** The new visible elements can be seen in the mid- to foreground of the view. The effect of the wall is to limit the mid-to background views.
- **Anticipated Viewer Response:** Residents from this vantage point would be sensitive to the changes in the visual environment due to their familiarity with the existing view.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be moderate, and mitigation, in the form of vine plantings on the wall, would likely lower the existing overall moderate visual quality to moderately low.

**Figure 2.8-5 Key Viewpoint #5, Residential Landscape Unit
(with mitigation at 5 years post-completion)**

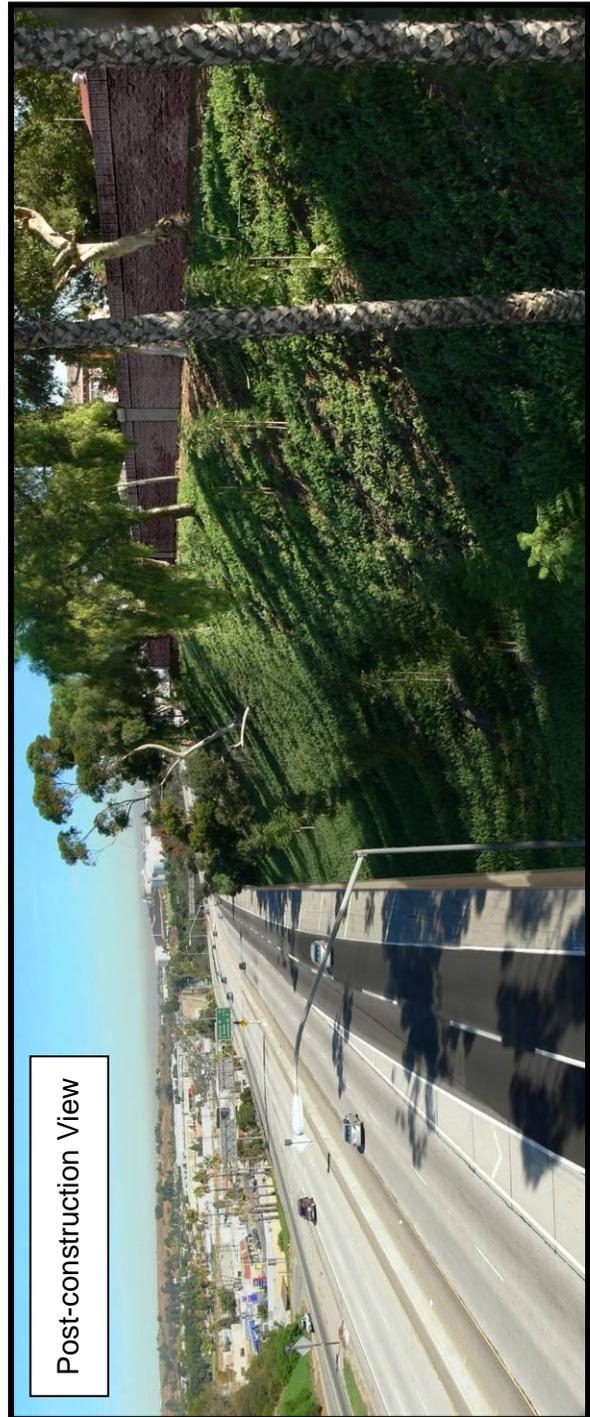
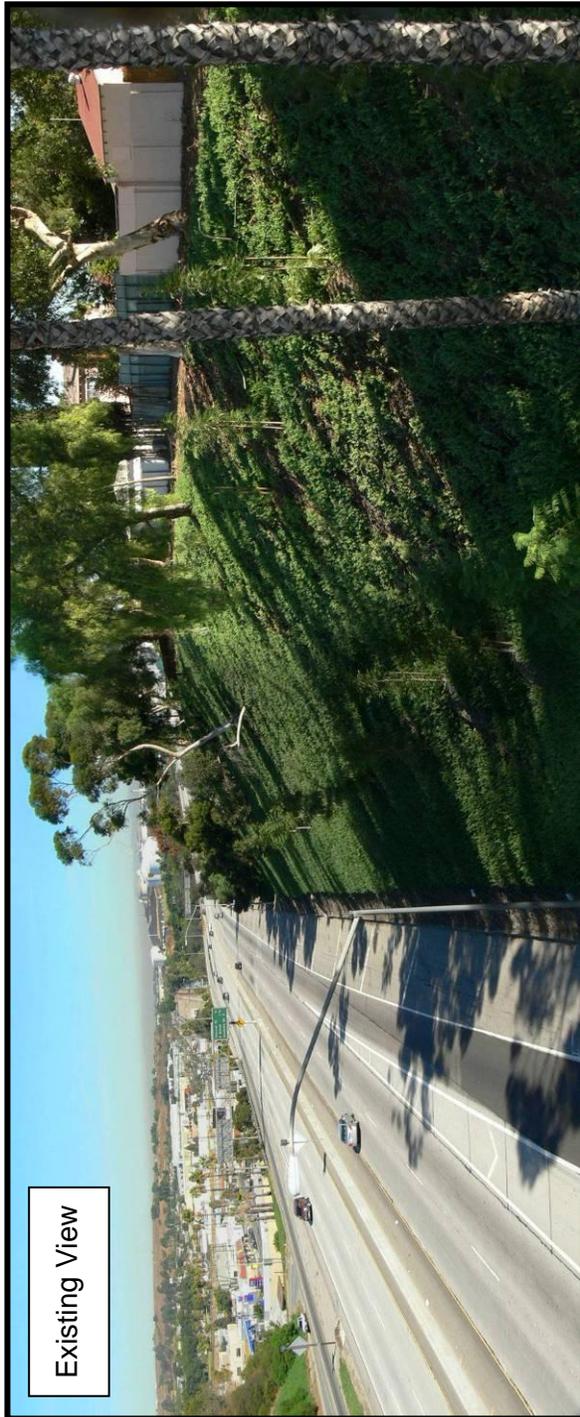


Key Viewpoint #6, Residential Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-6.

- **Orientation:** The photograph is taken from the MacArthur Avenue bridge, looking to the north along I-110. The view is from the perspective of the pedestrian on the bridge.
- **Existing Visual Character/Quality:** The view is into the I-110 freeway corridor closest to the existing homes. The overall visual quality of the view is moderately low, with moderately low vividness, intactness, and unity. The landscape area in the foreground increases the visual quality, while the background development and tanks act to lower the visual quality.
- **Proposed Project Features:** The proposed soundwall would be a very noticeable element in this view. In addition, the widened ramp and associated retaining wall would also be visible.
- **Changes to Visual Character:** The wider ramp and retaining wall, while noticeable, fit within what is anticipated for a freeway environment. From this vantage point, these changes would appear minor. If the existing trees near the top of the slope can be preserved, the addition of the soundwall would be less noticeable due to the partial screening provided by the vegetation.
- **Anticipated Viewer Response:** It is anticipated that the pedestrian on the bridge would likely notice the changes to the visual environment; however, because these changes are generally slight to the scale of the freeway, the overall sensitivity to the change should be low.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be small and would not alter the existing overall moderate visual quality.

**Figure 2.8-6 Key Viewpoint #6, Residential Landscape Unit
(with mitigation at 5 years post-completion)**

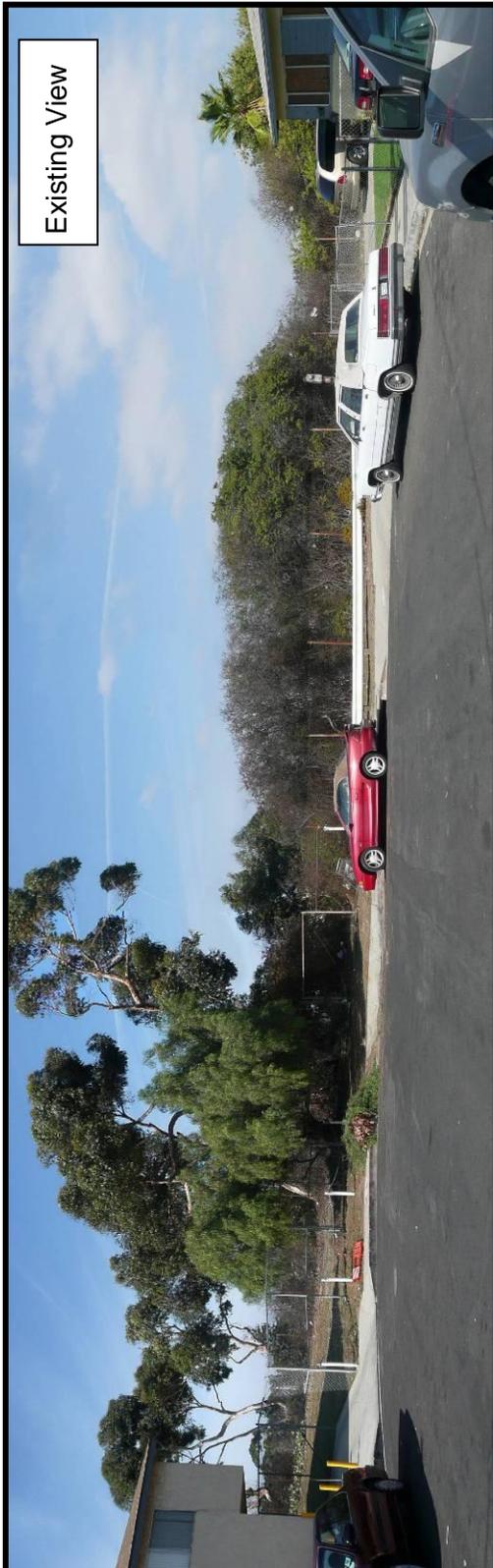


Key Viewpoint #7, Residential Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-7.

- **Orientation:** The photograph is taken to the northeast, across the cul-de-sac to the freeway ROW.
- **Existing Visual Character/Quality:** The view is into the I-110 freeway ROW from the neighborhood. The existing vegetation in the neighborhood currently blocks street-level views into the freeway corridor. The overall visual quality of the view is moderate, with moderate vividness, intactness, and unity.
- **Proposed Project Features:** From this vantage point, the new soundwall proposed at the end of the cul-de-sac would block the current views into the freeway ROW.
- **Changes to Visual Character:** The new visible elements can be seen in the mid- to foreground of the view. The effect of the wall is to limit the mid-to background views.
- **Anticipated Viewer Response:** Residents from this vantage point would be sensitive to the changes in the visual environment due to their familiarity with the existing view.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be moderate, and mitigation, in the form of vine plantings on the wall, would likely lower the existing overall moderate visual quality to moderately low.

**Figure 2.8-7 Key Viewpoint #7, Residential Landscape Unit
(with mitigation at 5 years post-completion)**

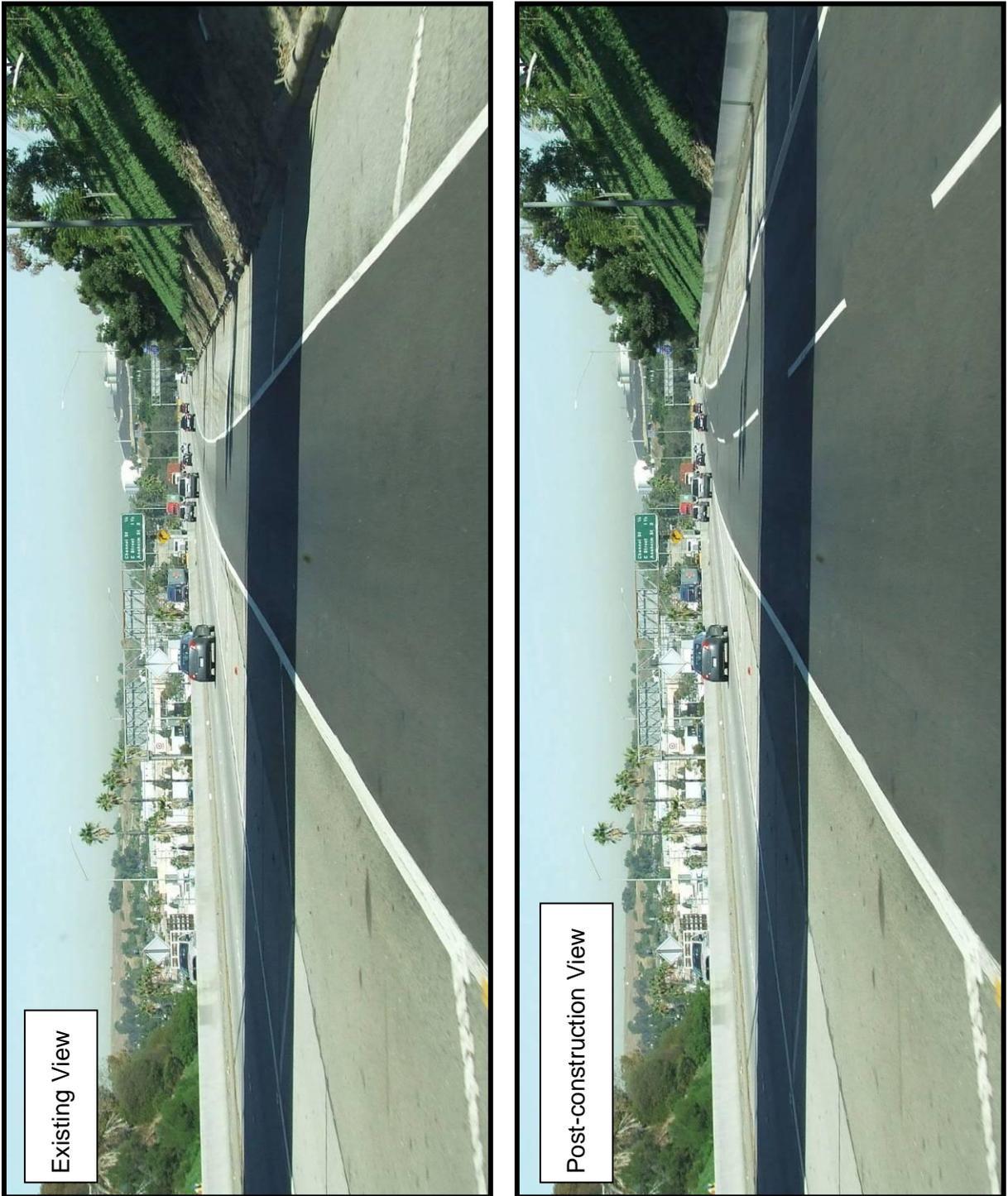


Key Viewpoint #10, I-110 Freeway Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-8.

- **Orientation:** The photograph is taken from the SR 47/I-110 Connector ramp looking to the north along I-110. The view is from the perspective of the automobile driver. This viewpoint is in a similar location to Key Viewpoint #6, but it is from below the bridge at freeway level.
- **Existing Visual Character/Quality:** The view is along the I-110 freeway corridor adjacent to the landscaped slope. The overall visual quality of the view is moderately low, with moderately low vividness, intactness, and unity. The landscape area in the foreground increases the visual quality, while the background development and tanks act to lower the visual quality.
- **Proposed Project Features:** From this vantage point, the retaining wall and widened ramp paving would be the most noticeable additions to the visual environment. Because of the height of the adjacent slope, the views to the new soundwall at the top of the slope would likely be very limited.
- **Changes to Visual Character:** The wider ramp and retaining wall, while noticeable, fit within what is anticipated for a freeway environment. From this vantage point, these changes would appear minor.
- **Anticipated Viewer Response:** Commuters who frequent the area are likely to be more sensitive to the changes than infrequent travelers or tourists in the area. This is due to the commuter's familiarity with the current views; however, given the slight changes that are anticipated, it is likely that even commuters would have a low sensitivity to the changes.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be small and would not alter the existing overall moderately low visual quality.

**Figure 2.8-8 Key Viewpoint #10, I-110 Landscape Unit
(with mitigation at 5 years post-completion)**



Key Viewpoint #16, John S. Gibson Boulevard Landscape Unit

A photo simulation of the proposed changes in this key viewpoint can be seen in Figure 2.8-9.

- **Orientation:** The photograph is taken from the John S. Gibson Boulevard/Port Entry/I-110 off-ramp intersection looking to the south toward the I-110 off-ramp. The view is from the perspective of the driver on John S. Gibson Boulevard.
- **Existing Visual Character/Quality:** The overall visual quality of the view is moderately low, with moderately low vividness, intactness, and unity.
- **Proposed Project Features:** A short retaining wall would be located along John S. Gibson Boulevard, which would be necessary to hold the slope from the ramp. The pavement on the on- and off-ramps would include an additional lane, making it a bigger presence in the view.
- **Changes to Visual Character:** The wider ramp and retaining wall, while noticeable, fit within what is anticipated for a freeway environment. From this vantage point, these changes would appear minor.
- **Anticipated Viewer Response:** To the frequent traveler in the area, the changes would be noticeable due to the traveler's familiarity with the existing view; however, because the anticipated changes do not represent a large change from the existing visual environment, it is anticipated that viewer sensitivity would be low.
- **Resulting Visual Impact:** With the anticipated changes, the effect to the visual quality of the view would be small and would not alter the existing overall moderately low visual quality.

Figure 2.8-9 Key Viewpoint #16, John S. Gibson Boulevard Landscape Unit (with mitigation at 5 years post-completion)



**Table 2.8-1
Summary of Existing and Proposed Visual Quality by Key Viewpoint – No Build Alternative**

Key View No.	Landscape Unit	Primary Project Elements	FHWA Visual Assessment Criteria						Overall Visual Quality (V+I+U/3)	
			Vividness ³		Intactness ³		Unity ³		Exist ¹	Prop ²
			Exist ¹	Prop ²	Exist ¹	Prop ²	Exist ¹	Prop ²		
No Build Alternative										
4	Residential Landscape Unit	No project would be built under this alternative. The Port would operate under the existing conditions of the John S. Gibson Boulevard/I-110 access ramps and SR 47/I-110 Connector.	4.3	N/A	4.3	N/A	4.0	N/A	4.20	N/A
5	Residential Landscape Unit		4.3	N/A	4.3	N/A	4.0	N/A	4.20	N/A
6	Residential Landscape Unit		3.4	N/A	3.0	N/A	3.0	N/A	3.13	N/A
7	Residential Landscape Unit		3.2	N/A	3.0	N/A	3.0	N/A	3.07	N/A
10	I-110 Freeway Landscape Unit		3.4	N/A	3.4	N/A	3.0	N/A	3.26	N/A
16	John S. Gibson Boulevard Landscape Unit		2.8	N/A	2.5	N/A	2.5	N/A	2.60	N/A
1 – Existing Visual Quality Rating for Each Key Viewpoint 2 – Proposed Visual Quality Rating for Each Key Viewpoint (no rating for the No Build Alternative) 3 – Evaluation Scale: 1 to 7 (1 = very low, 4 = moderate, 7 = very high)										

**Table 2.8-2
Summary of Existing and Proposed Visual Quality by Key Viewpoint – Build Alternative**

Key View No.	Landscape Unit	Primary Project Elements	FHWA Visual Assessment Criteria						Overall Visual Quality (V+I+U/3)	
			Vividness ³		Intactness ³		Unity ³		Exist ¹	Prop ²
			Exist ¹	Prop ²	Exist ¹	Prop ²	Exist ¹	Prop ²		
Build Alternative										
4	Residential Landscape Unit	The SB SR 47/NB I-110 connector would be widened from one lane to two lanes.	4.3	4.2	4.3	4.1	4.0	4.0	4.20	4.10
5	Residential Landscape Unit	A through lane would be added between the connector and West Channel Street interchange NB off-ramp at John S. Gibson Boulevard. The Channel Street Overhead would be widened by approximately 14 feet.	4.3	4.3	4.3	4.3	4.0	4.0	4.20	4.20
6	Residential Landscape Unit	The NB I-110 on- and off-ramp at John S. Gibson Boulevard would be widened with Caltrans standard shoulders. The on-ramp would be lengthened and realigned to the east, resulting in a new edge of pavement ranging from 12 feet to 42 feet east of the existing ramp.	3.4	3.0	3.0	3.0	3.0	3.0	3.13	3.00
7	Residential Landscape Unit	John S. Gibson Boulevard and the NB I-110 ramps would be restriped to provide longer left-turn lanes. The signal system would be upgraded. A new 5-foot-wide concrete sidewalk would be provided for the SB direction south of the intersection up to the Channel Street intersection.	3.2	3.0	3.0	3.0	3.0	3.0	3.07	3.00
10	I-110 Freeway Landscape Unit	A bike lane would be striped for the NB direction between this intersection and the Channel Street intersection.	3.4	3.2	3.4	3.1	3.0	3.0	3.10	N/A
16	John S. Gibson Boulevard Landscape Unit	Seven masonry soundwalls up to 14 feet high would be constructed within the Caltrans ROW along the property line of the residences located adjacent to the SR 47/I-110 interchange.	2.8	2.8	2.5	2.5	2.5	2.5	2.60	2.60
1 – Existing Visual Quality Rating for Each Key Viewpoint; 2 – Proposed Visual Quality Rating for Each Key Viewpoint 3 – Evaluation Scale: 1 to 7 (1 = very low, 4 = moderate, 7 = very high)										

2.8.4 Avoidance, Minimization, and Mitigation Measures

2.8.4.1 No Build Alternative

No mitigation is required.

2.8.4.2 Build Alternative

Construction

No avoidance, minimization, and mitigation measures are required.

Permanent

To address the potential adverse visual impacts to the project area, and community concerns over the visual change of scale of the highway corridor, the following actions are recommended. With implementation of these mitigation measures, the visual impacts of this project can be reduced and would not result in a substantial change in overall visual quality for the area.

- MM VIS-1 Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project elements based on the Caltrans Aesthetic and Landscape Master Plan.
- MM VIS-2 Apply architectural detailing to the soundwalls and retaining walls, including textures, colors, and patterns. Include caps that will provide shadow lines.
- MM VIS-3 Include vine plantings to soften the new soundwalls.
- MM VIS-4 Apply anti-graffiti coating to all visible walls.
- MM VIS-5 Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange and the highway.
- MM VIS-6 Use a visually compatible ornamental groundcover in any detention/water quality basins or geoswales that are located within ornamental landscape areas.
- MM VIS-7 Landscape and revegetate disturbed areas to the greatest extent feasible. Landscaping should include appropriate irrigation, establishment, and maintenance to assure ongoing success of the plantings.



2.9 Cultural Resources

This section addresses potential impacts associated with archaeological and historic architectural resources within the project Area of Potential Effects (APE). The information is excerpted from the Historic Property Survey Report (HPSR), Archaeological Survey Report (ASR), Supplemental ASR, Historical Resources Evaluation Report (HRER), Extended Phase I Report (Ex Ph I), Supplemental Ex Ph I Report, Archaeological Evaluation Report (AER), and Finding of Effect (FOE) Report, prepared as part of this environmental document.

2.9.1 Regulatory Setting

“Cultural resources,” as used in this document, refers to all historical and archaeological resources, regardless of significance. The following laws and regulations deal with cultural resources.

The National Historic Preservation Act of 1966 (NHPA), as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for 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 such 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 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the ACHP, FHWA, State Historic Preservation Officer (SHPO), and 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. FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historical resources are considered under CEQA, as well as PRC Section 5024.1, which established the California Register of Historical Resources (CRHR). PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet NRHP listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its ROWs.

2.9.2 Affected Environment

2.9.2.1 Area of Potential Effects

The APE for the project was first established in consultation with Caltrans’ Gary Iverson, Principal Investigator, Prehistoric Archaeology, and Ghaboos Hamdi, Project Manager, on

October 26, 2009. The APE was later revised in consultation with Noah Stewart, Principal Architectural Historian, and Ghaboos Hamidi, Project manager, on October 7, 2010.

The APE boundary was drawn to include all areas that could be subject to ground disturbance within the Caltrans' right-of-way (ROW), plus the area needed to widen John S. Gibson Boulevard and to construct sound walls.

The APE is comprised of paved roadways (the I-110 freeway, John S. Gibson Boulevard, the ramps connecting them, and a Port of Los Angeles container facility) and unpaved landscaped areas. The unpaved area along the eastern edge of pavement of I-110 north of the railroad undercrossing, including the on- and off-ramps to John S. Gibson Boulevard, is on fill that was placed to support the freeway. The area on both sides of Channel Street is on fill placed to fill the marsh and bay that formerly existed there, as shown on the 1896 USGS Redondo quadrangle. South of Miraflores Avenue, the unpaved area along the east side of I-110 is a steep cut slope that extends from the freeway up to the top of Barton Hill. The area between the ramps in the SR 47/I-110 interchange is on the floor of the cut made for the construction of the interchange. The areas located at the top of the cut within Caltrans' right-of-way are generally disturbed due to residential construction activities. However, there were some undisturbed soils identified at the area near the residential fence line next to the Caltrans' ROW.

The vertical APE extends to a depth of 3 to 5 feet where excavation would occur for construction of the additional lane where the northbound connector from SR 47 merges with I-110. This area is in a cut that is already about 30 feet below the original ground surface at this point. This cut was made through Barton Hill in 1968-1970 in order to construct the SR 47/I-110 interchange at an elevation about 10 to 30 feet lower than the original top of Barton Hill (time of construction from Butler 1974; depth of cut from comparison of pre-construction topography shown on 1964 USGS Torrance quadrangle with current elevations from Google Earth). At Channel Street, the vertical APE extends to a depth of over 15 feet where construction pits would be excavated for the columns to support the widening of the Channel Street Overhead Crossing and piles would be driven to an unknown depth. The Channel Street area appears to be built on fill that was placed in a westward extension of a bay of Wilmington Lagoon. This bay previously extended farther west, as shown on the 1896 edition of the USGS Redondo quadrangle, compared to the westward extent of the Southwest Slip, as shown on the 1964 edition (photorevised 1981) of the USGS Torrance quadrangle. In the John S. Gibson Boulevard widening area, the vertical APE is 1 to 3 feet below surface. The vertical APE in areas where soundwalls would be constructed is 10 to 15 feet in order to allow for excavation for footings. The vertical APE in the rest of the APE is near zero because no additional excavation is planned in these areas. I-110 north of the railroad is built on fill since the elevation of the freeway varies from 36 feet to 63 feet in this

area, according to Google Earth, while the original elevation of this area was less than 20 feet as shown on the 1964 edition of the USGS Torrance quadrangle. North of the southern boundary of parcel 7400-016-001, I-110 cuts through a hill with an original elevation of over 120 feet. The elevation of I-110 in this area is now 73 to 85 feet, according to Google Earth, while the original elevation of this area was more than 120 feet as shown on the 1964 edition of the USGS Torrance quad.

2.9.2.2 Research Methods

A cultural resources record search was performed on November 11, 2008, at the South Central Coastal Information Center (SCCIC) of the California Historic Resources Information System (CHRIS) at California State University, Fullerton, to identify previously recorded cultural resources within the survey area and within a 1-mile radius of the project area. The SCCIC is the designated repository of the CHRIS for Los Angeles County, and it houses records and associated studies concerning historic architectural and archaeological resources in Los Angeles County. In addition to site records and reports on file at the SCCIC, the following sources were consulted for this project:

- NRHP Web site (<http://www.cr.nps.gov/nr>), through August 2009
- California Historical Landmarks (State of California, 1996) *et seq.*
- California Points of Historical Interest (State of California, 1992) *et seq.*
- Office of Historic Preservation Historic Property Inventory
- City of Los Angeles Historic-Cultural Monuments
- Los Angeles Central Library
- LAHD archives
- Electric Railway Historical Association of Southern California online archives – historical maps including the 1896 United States Geological Survey (USGS) San Pedro and Redondo 15-minute quads and the 1944 Army Map Service Redondo and San Pedro quads

Forty-two (42) previous studies have been performed within the 1-mile radius of the project APE. Three of these included portions of the project APE. One of the studies included a portion of John S. Gibson Boulevard within the APE, and another included the I-110 area in the northern part of the APE. The third was a linear survey that crossed the APE in the vicinity of Channel Street. As a result of the previous studies, approximately 25 percent of the current project APE has been surveyed for archaeological resources. Prior to these studies that were completed to comply with CEQA and NEPA requirements, several archaeologists informally surveyed the area. These included N.C. Nelson in 1912, F.H. Racer in 1939, D.L. True in 1939, and Hal Eberhart in 1952. These archaeologists recorded most of the prehistoric sites in the area before many of them were destroyed by subsequent development. Two cultural resources have been

recorded within the project APE, and 41 cultural resources have been recorded within 1-mile of the project. Of the 41 cultural resources within 1-mile, 20 are prehistoric archaeological sites and 21 are structures from the historical period. The two cultural resources recorded within the APE (CA-LAN-152 and CA-LAN-283) are prehistoric archaeological sites.

On April 21, 2009, a letter was sent to consulting and interested parties who may have knowledge of or concerns with cultural resources in the area, requesting information regarding any historic buildings, districts, sites, objects, or archaeological sites of significance within the project APE. The letter was sent to the following local government and local historical societies/historical preservation groups:

- San Pedro Bay Historical Society
- Wilmington Historical Society
- Historical Society of Southern California
- Los Angeles City Historical Society
- The Electric Railway Historical Association of Southern California
- Southern California Scenic Railway Association, Inc.

No responses were received.

In accordance with Section 106 of the NHPA, on November 14, 2008, a request was made to the Native American Heritage Commission (NAHC) for a review of the Sacred Lands File (SLF) to determine if any known cultural resources are present within or adjacent to the project APE. The NAHC responded on November 17, 2008, stating that the SLF failed to indicate the presence of Native American cultural resources within the project vicinity. The NAHC requested that four Native American individuals and/or organizations be contacted to solicit any information or concerns regarding cultural resources issues related to the proposed project.

Letters requesting information about the project area and comments about the project were sent to the following Native American contacts on November 19, 2008: Cindi Alvitre, John Tommy Rosas, Anthony Morales, Sam Dunlap, and Robert Dorame. In a telephone conversation with Anthony Morales on December 8, 2008, he requested grading monitoring by archaeological and Native American monitors because he considers the area to be sensitive. In a letter from Robert Dorame dated January 30, 2009, he requested grading monitoring by a Native American from his group because the area is sensitive. In a telephone conversation with Sam Dunlap on March 6, 2007, he requested grading monitoring by an archaeologist because there may be buried remnants of the sites that were recorded in the area. In an e-mail from John Tommy Rosas received on November 20, 2008, he stated that he objects to and opposes the proposed project

based on ~~past~~ past and current indigenous rights violations by [Port], *et al.*; and City and Caltrans.” He requested direct consultation with the Caltrans Tribal Liaison. Consultation with Mr. Rojas was carried out under the auspices of the Federal guidelines for Section 106 consultation as an interested Native American party. During this consultation, Mr. Rojas requested that nondestructive geophysical testing be carried out at site CA-LAN-283. The geophysical testing was carried out during the week of August 22, 2009 by Caltrans, and the results were incorporated into the HPSR prepared for this project (Note that the HPSR was sent to Mr. Rojas for his information). A follow-up phone call was made to Cindi Alvitre on December 17, 2008, and a voice mail message was left. A second follow-up phone call was made to Cindi Alvitre on January 29, 2009, but she has not responded.

Another outlet for public involvement was the open house community meeting held on January 7, 2009, at Banning’s Landing Community Center. The primary concerns voiced by the community pertained to the protection of the skate facility, as well as noise, vibration, and air quality, all of which are addressed in other sections of this document.

2.9.2.3 Historic Architectural Resource Findings

There were no historic architectural resources identified within the APE by the records search completed for the HPSR; however, one resource, the Pacific Electric Railway West Basin Line, was determined eligible for listing in the CRHR in the Wilmington Waterfront Development Project Environmental Impact Report. Furthermore, one resource, the Pacific Electric San Pedro via Torrance Line was determined to have been constructed in 1903. Both cultural resources were evaluated for inclusion in the NRHP and/or the CRHR.

Pacific Electric Railway West Basin Line

The Pacific Electric Railway (now known as Union Pacific Railroad which is part of the Harbor Belt Line at this location) West Basin Line between Broad Avenue and Front Street was previously determined eligible for listing in the California Register of Historical Resources under Criterion 1 for the rail’s association with regional settlement and patterns of urban development which can be attributed to the development and route of the railway; Criterion 2 because the Pacific Electric Railway was the culmination of the life work of Henry Edwards Huntington and his vision of developing Southern California along a network of high-speed steel-railed routes; and Criterion 3 because Pacific Electric Railway was an electric railway and embodies the distinctive characteristics of a type, period, or method of construction. The Pacific Electric Railway West Basin Line appears to be significant for one or more of the following NRHP Criteria for Evaluation: A (event), B (person), and C (design/construction) for the reasons stated above.

The West Basin Line was constructed in 1910 and was incorporated into the Harbor Belt Line, which was established in 1929, and has subsequently been maintained by the Los Angeles Harbor Department (LAHD). A site visit was conducted on May 21, 2009 by the project qualified architectural historian, with Bob Henry, Port Commission Executive Officer, who previously managed the Pacific Electric Railway Improvement Project at the Port. Research was conducted in Sanborn Fire Insurance Maps, LAHD archives, and the Electric Railway Historical Association of Southern California (ERHA) online archives. The segment of the Pacific Electric Railway West Basin Line located within the APE for this project (beginning at the intersection of John S. Gibson Boulevard and Channel Street, and ending approximately 2,000 feet north of the intersection) was a segment of the San Pedro via Dominguez Line portion of the West Basin Line. Research in the ERHA online archives indicates that this rail line largely carried freight and was rebuilt in 1944 with 90-pound rail for freight traffic.

Research in the Sanborn Fire Insurance maps indicates that the segment of the Pacific Electric Railway West Basin Line located within the APE as described above was originally located east of the Wilmington and San Pedro Road, which followed the boundary of Rancho Los Palos Verdes. The Wilmington-San Pedro Road was relocated and dedicated as John S. Gibson Boulevard in 1975. Research in the LAHD archives and personal communication with Bob Henry, Port Commission Executive Officer, indicates that the Wilmington and San Pedro Road and original spur were incorporated into a container facility in the 1980s for internal circulation at that wharf, and the rail line was rerouted and constructed on the east side of John S. Gibson Boulevard at that time. The site visit conducted on May 21, 2009, and research in the LAHD archives confirmed that the rail line has been rerouted and reconstructed. Because the segment of the West Basin Line as described above was rerouted and reconstructed to modern freight rail standards in the 1980s, the segment of the West Basin Line located within the APE does not retain integrity of location, design, materials, workmanship, and association. The rerouted rail line is still located within the Port of Los Angeles; therefore the segment of the West Basin Line located within the APE retains integrity of setting and feeling. In addition, because the West Basin Line was rerouted and reconstructed in the 1980s, the line is not 50 years of age. Therefore, the segment of the Pacific Electric Railway West Basin Line located within the APE as described above does not possess sufficient integrity to be considered eligible for listing in the NRHP and has not achieved significance within the last 50 years as defined by Criteria Consideration G, and is not eligible for listing in the NRHP. The property has also been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and it is not considered an historical resource for the purposes of CEQA.

Pacific Electric San Pedro via Torrance Line

The San Pedro via Torrance Line was constructed by the Pacific Electric Railway as the first line to enter San Pedro with service beginning in 1903. The San Pedro via Torrance Line was instrumental in the rail development of the Port of Los Angeles for both commercial freight and passenger service, and spurred commercial and residential development in San Pedro. Henry Huntington is a historic person in the development of southern California, and was responsible for the construction of several rail lines throughout the region. The line reflects Huntington's first quest to dominate rail development in the Port of Los Angeles. The San Pedro via Torrance line was originally constructed with 70 pound standard-width gauge rail with redwood ties and gravel ballast. Research does not indicate this reflects exceptional or innovative design. The Pacific Electric Railway San Pedro via Torrance Line appears to be significant for one or more of the following NRHP Criteria for Evaluation: A (event) and B (person) for the reasons stated above.

Personal communication with Bob Giannoble, Pacific Harbor Line Company Chief Engineer, indicates that the segment of the San Pedro via Torrance Line located within the APE (beginning at the intersection of John S. Gibson Boulevard and Channel Street to approximately 500 feet northwest of the intersection) rail gauge was upgraded from 136-pound gauge to 110-pound gauge approximately 10 years ago. Because the rail gauge, and presumably ties and ballast, has been upgraded over the course of time, the resource does not retain integrity of design, materials, workmanship, and association. The San Pedro via Torrance Line follows its original route, and retains integrity of location, setting, and feeling. Therefore, the segment of the Pacific Electric Railway San Pedro via Torrance Line located within the APE as described above does not possess sufficient integrity to be considered eligible for listing in the NRHP and has not achieved significance within the last 50 years as defined by Criteria Consideration G, and is not eligible for listing in the NRHP. The property has also been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and it is not considered an historical resource for the purposes of CEQA.

2.9.2.4 Archaeological Resource Findings

Site CA-LAN-152 was recorded where John S. Gibson Boulevard intersects with the I-110 access ramps that connect to John S. Gibson Boulevard and the Gibson Gate entrance into the Port of Los Angeles container facility. The site was on a bluff that was graded away during the 1960s, according to Dillon (1981), or was in the marsh that was later filled to form the Channel Street area, based on plotting the site location from the records search map on the 1896 USGS Redondo quad. In summary, Site CA-LAN-152 has either been destroyed by grading or has been

covered by more than 10 feet of fill. Excavation activities for the project would not exceed the depth of fill in this area and would not affect any native undisturbed soil.

The location of previously recorded archaeological site CA-LAN-283 was the top of Barton Hill (Butler, 1974: Figure 1). Data recovery was carried out by California State University Long Beach in 1968 prior to construction of the SR 47/I-110 interchange. The entire interchange area was excavated 10 to 30 feet below the original surface of Barton Hill when the construction took place. This removed almost all of the area recorded as Site CA-LAN-283 within the current project APE, except for the narrow strips of land between the top of the slope where a series of soundwall would be constructed. Two Ex Ph I surveys were conducted at the proposed soundwall construction sites located at the top of the slope along the Caltrans ROW line adjacent to the first-row residences facing the freeway within the project APE. The results of the survey are summarized below.

An Ex Ph I survey was conducted in September 2009 to determine if intact archaeological deposits associated with Site CA-LAN-283 are present within the project APE. The Ex Ph I testing program consisted of 16 shovel test pits (STPs) and 2 hand-excavated units. The results from the STPs and hand-excavated units showed that prehistoric flaked stone debitage and a few flaked stone tools, along with marine shell, are mixed with 20th century building materials (i.e., concrete and glass) down to sterile soil, which is 50 to 85 centimeters below the surface. This indicates that the remnant of Site CA-LAN-283 in the study area was disturbed and mixed with building materials when the house foundations were demolished prior to 1968. It appears that the prehistoric deposit is no longer intact.

A Supplemental Ex Ph I survey was conducted in January 2010 to determine if intact archaeological deposits associated with Site CA-LAN-283 are present within the project supplemental APE where the additional soundwalls would potentially be constructed. The Supplemental Ex Ph I program consisted of the excavation of 32 STPs and 2 hand-excavated units. The results from the STPs and hand-excavated units indicate that there is a relatively undisturbed remnant of CA-LAN-283 in the supplemental APE.

Following completion of the Supplemental Ex Ph I, CA-LAN-283 was evaluated in the AER (September 2010) as eligible (under criterion D) for listing in the NRHP and the CRHR.

2.9.3 Environmental Consequences

2.9.3.1 Construction Impacts

No Build Alternative

Because no construction would occur under the No Build Alternative, there would be no impacts.

Build Alternative

The portion of site CA-LAN-283 in the project APE that contributes to the eligibility of CA-LAN-283 consists of a narrow strip of land at the top of the slope on the west side of the I-110/SR 47 interchange. Intact archaeological deposits that have the potential to yield important information located in this strip of land would be affected by construction of portions of soundwalls. Specifically, portions of the intact deposits would be destroyed by excavations necessary to construct the footings for the soundwalls. Construction of the soundwalls would result in physical destruction of a portion of the area that contributes to the eligibility of CA-LAN-283 [36 CFR 800.5(a)(2)(i)]. This would result in an adverse effect on CA-LAN-283.

In accordance with 14 *California Code of Regulations* (CCR) Section 15064.5(e), in the event of the accidental discovery of any human remains in any location other than a dedicated cemetery, the Los Angeles County Coroner must be notified of the discovery (California Health and Safety Code Section 7050.5), and all activities in the immediate area of the find must cease until appropriate and lawful measures have been implemented. If the coroner determines that the remains are recent or of Native American origin, then the coroner will notify the NAHC in Sacramento within 24 hours to determine Most Likely Descendent (MLD) for the area. The designated MLD can make recommendations to the landowner or person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2.9.3.2 Permanent Impacts

No Build Alternative

Because no construction would occur under the No Build Alternative, no permanent impacts would occur.

Build Alternative

Historic properties in the APE were identified as part of the comprehensive cultural resource study conducted as part of this project. The West Belt Line Railroad and the San Pedro via Torrance Line Railroad, identified in the APE, were evaluated and determined to be not eligible for the NRHP. Prehistoric archaeological sites CA-LAN-152 and CA-LAN-283 were identified within the APE. CA-LAN-152 was determined to either have been destroyed or covered by over

10 feet of fill. CA-LAN-283 was evaluated and determined to be eligible for the NRHP under Criterion D.

Caltrans has determined that the undertaking (the Project) will have an adverse effect on historic properties (Site CA-LAN-283) pursuant to Section 106 PA Stipulation X.C and, has consulted with the State Historic Preservation Officer (SHPO) regarding the resolution of adverse effects, pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a), and 800.6(b)(1). SHPO has concurred with Caltrans' findings on December 9, 2010 (FHWA101101A). A data recovery program will be undertaken to resolve the adverse effect of the eligible archaeological site CA-LAN-283.

Because the Harbor Belt Line West Basin Line and Harbor Belt Line San Pedro via Torrance Line are not eligible for listing in the NRHP and Site CA-LAN-152 may have been destroyed or buried beneath the level that this project would reach, these resources are not subject to Section 4(f) evaluation, as described in Section 2.1.2 of this report.

Caltrans has also determined that the National Register-eligible archaeological site CA-LAN-283 is exempt from Section 4(f) as described in 23 CFR 744.13b(1) as this archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. In accordance with 23 CFR 744.13b(2), Caltrans has consulted with SHPO, and received SHPO concurrence on February 4, 2011.

2.9.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No mitigation is required.

Build Alternative

Construction

Based on the results of the ASR, Supplemental ASR, Ex Ph I, and Supplemental Ex Ph I, the possibility that buried archaeological resources would be encountered during ground disturbance is minimal outside the Site CA-LAN-283 boundary; therefore, archaeological and Native American monitoring is not recommended in areas where ground disturbance would occur outside the Site CA-LAN-283 boundary. Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code (PRC) Section 5097.98,

if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Iverson, Environmental Branch Chief/ District Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

A data recovery plan for the portion of archaeological site CA-LAN-283 that would be adversely affected by the proposed project has been prepared following guidance in Attachment 6 of the Section 106 PA and has been included as a stipulation in the Memorandum of Agreement (MOA) to be signed by Caltrans, the SHPO, and the interested Native American parties. Caltrans will ensure that the data recovery plan entitled “Data Recovery Plan for the Portion of CA-LAN-283 to be affected by the John S. Gibson Boulevard/ I-110 Access Ramps and SR 47/I-110 Connector Improvements Project” is implemented. The data recovery plan would be implemented prior to commencement of ground-disturbing activities for construction of the soundwalls.

MM CUL-1 Implement an Archaeological Data Recovery Plan (also known as Phase III excavations) for the portion(s) of Site CA-LAN-283 to be affected by the project prior to any ground-disturbing activities.

MM CUL-2 In the unlikely event that previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.

Permanent

No avoidance, minimization, and/or mitigation measures are required.



PART II - PHYSICAL ENVIRONMENT

2.10 Hydrology and Floodplains

This section addresses potential impacts to stormwater drainage systems and floodplains that could result from implementation of the proposed project. The information presented in this section is excerpted from the Storm Water Data Report prepared as part of this project.

2.10.1 Regulatory Setting

Executive Order 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 FHWA requirements for compliance are outlined in 23 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 impacted by the project

The base floodplain is defined as ~~the~~ "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~~ "an action within the limits of the base floodplain."

2.10.2 Affected Environment

A Storm Water Data Report was prepared by Parsons in September 2010.

2.10.2.1 Overall Hydrologic Conditions

The project site is located within the Los Angeles Harbor watershed, which is part of the Dominguez Channel Hydrologic Unit, with the Hydrologic Sub-Area (HSA) identified as 411.02, and is within the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). The Dominguez Watershed is comprised of approximately 110 square miles of land in the southern portion of Los Angeles County. Approximately 96 percent of the total watershed area is developed, and the land use is predominantly transportation. Typically, watersheds are defined by the natural topography of its drainage area; however, the Dominguez Watershed boundary is defined by a network of storm drains and smaller flood control channels.

The Dominguez Channel extends from Los Angeles International Airport to Los Angeles Harbor and drains large, if not all, portions of the cities of Inglewood, Hawthorne, El Segundo, Gardena, Lawndale, Redondo Beach, Torrance, Carson, and Los Angeles. Drainage along the freeway alignment is away from the freeway pavement towards designed collection along the highway. The receiving water body near the project limits is Los Angeles Harbor.

According to the Caltrans Water Quality Planning Tool, HSA 411.02 has an average annual rainfall of 13.8 inches. The area has a Mediterranean climate, with warm summers and mild winters. The rainy season, as defined by the LARWQCB, is from October 1 through May 1, with most of the rain occurring primarily from November through April. The annual rainfall for a typical dry year and wet year are 5.53 inches and 20.67 inches, respectively.

The project is located in a heavily urbanized land-use area zoned commercial and industrial. A very high percentage of the surrounding project area is impervious, consisting primarily of buildings and paved surfaces. The only substantial pervious areas are the vacant parcels adjacent to NB I-110. The small amount of pervious land that does exist has moderately slow infiltration rates when thoroughly wetted and consists chiefly of moderately well to well-drained sandy loam.

The ground surface at the proposed project site has an elevation ranging from approximately 90 feet above mean sea level (MSL) at the highest point of the SR 47/NB I-110 Connector to approximately 40 feet at about 500 feet north of the John S. Gibson Boulevard/NB I-110 on-ramp. From the highest point of the SR 47/NB I-110 Connector, the alignment slopes down towards the northern and southern property boundary. At the location of the SR 47/NB I-110 Connector, the freeway is bounded on the east by the hillside, with residential homes on top of the hill. The freeway is generally above the adjacent grade for the rest of the alignment.

2.10.2.2 Existing Drainage System

From the highest point of the SR 47/I-110 Connector, the alignment slopes down towards the north and south property boundaries. At the SR 47/I-110 Connector, the freeway is bounded on the east by a hillside with residential homes on top of the hill. The freeway is generally above adjacent grade at the rest of the alignment. Drainage along the freeway alignment is away from the freeway pavement towards designed collection along the roadway. Within the area of the SR 47/I-110 Connector, the surface drainage from the adjacent hills is generally towards the freeway designed collection along the roadway.

2.10.2.3 Proposed Drainage System

Within the project limits, the existing paved surface area totals 3.49 acres. The proposed project is expected to add an additional 2.31 acres, totaling 5.8 acres of impervious surface area. The

proposed project would result in some localized increases in runoff due to an increase in impervious area. The proposed permanent treatment devices for this proposed project are two biofiltration swales with the ability to treat 100 percent of the flow from both existing and proposed paved surfaces within the project limits.

The proposed realignment of the ramps and local streets would result in existing slopes being cut and disturbed, and new slopes being created. Disturbed slopes would be revegetated following Caltrans policies and procedures. Benches, rounded slopes, and other measures would be considered to reduce concentrated flow.

The proposed project would create and modify drainage ditches, berms, and swales. The proposed project would create new slopes and modify existing slopes. Surface water from the proposed project site would be diverted to designed collection along the roadway and eventually to Los Angeles Harbor via the Main Channel. The project would consider rip-rap, flared end sections, lining the ditches and swales, and other devices to reduce concentrated flow.

2.10.2.4 Floodplain

Floodplain boundaries were delineated on the Flood Insurance Rate Maps (FIRMs) by the Federal Emergency Management Agency (FEMA). The project site is included on FEMA's FIRM, Community Panel Numbers 06037C2031F and 06037C1945F (both dated September 26, 2008). The project site is located entirely in Zone X, which is an area determined to be outside the 100- and 500-year floodplains (see Figure 2.10-1).

2.10.3 Environmental Consequences

2.10.3.1 Construction Impacts

No Build Alternative

No direct or indirect effects to hydrology would be expected to occur under the No Build Alternative.

Build Alternative

Storm Drain System

The affected construction is almost entirely built-out; therefore, no substantial increase in runoff flow is expected. Construction-related nuisance flows would be diverted into detention basins to be treated before discharging to existing storm drains. Construction site sheet flows would be retained to prevent construction runoff.

Floodplain

Because the proposed project is not located in a 100- or 500-year floodplain, no flood flows would be impeded or redirected under the Build Alternative.



Figure 2.10-1 Floodplain Map Covering the Project Area

2.10.3.2 Permanent Impacts

No Build Alternative

No permanent impacts are anticipated under the No Build Alternative.

Build Alternative

Storm Drain System

The proposed project would not create or contribute runoff that would exceed the capacity of the existing stormwater drainage system. The proposed project would not substantially alter the existing drainage pattern and would not substantially deplete groundwater supplies or interfere with groundwater recharge.

Floodplain

Because the proposed project is not located in a 100- or 500-year floodplain, no flood flows would be impeded or redirected under the Build Alternative.

2.10.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

Construction

Because there would be no impacts to the storm drain system and floodplain, no avoidance, minimization, and/or mitigation measures are required. Construction-related nuisance flows would be diverted into Construction Site Best Management Practices (BMPs) for treatment before discharging to existing storm drains. See MM WQ-1 in Section 2.11.4 for the mitigation measure.

Permanent

No avoidance, minimization, and/or mitigation measures are required.



2.11 Water Quality and Stormwater Runoff

This section addresses potential impacts associated with water quality that could result from implementation of the proposed project.

2.11.1 Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (USACE) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutants into waters of the United States. The U.S. Environmental Protection Agency (EPA) has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCBs also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate stormwater discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the statewide permit, and projects performed by other entities on Caltrans ROW (i.e., encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects more than 1-acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Caltrans activities less than 1-acre require a Water Pollution Control Program.

The proposed project lies within the City of San Pedro and the County of Los Angeles and is regulated by the LARWQCB. In addition, the Los Angeles County Department of Public Works (LACDPW) regulates a Standard Urban Stormwater Mitigation Plan (SUSMP). This plan requires that various BMPs be implemented in an effort to help remove unwanted pollutants and trash from entering the existing storm drain systems.

2.11.2 Affected Environment

The information presented in this section is excerpted from the Storm Water Data Report prepared for this project. The proposed project is located within the Los Angeles Harbor watershed, which is part of the Dominguez Channel Hydrologic Unit, with the HSA identified as

411.02. Water bodies within the Los Angeles Harbor Watershed located on 303(d) of the CWA 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, Los Angeles/Long Beach Inner Harbor, Los Angeles/Long Beach Outer Harbor (inside breakwater), Machado Lake (Harbor Park Lake), Point Fermin Park Beach, and Wilmington Drain.

Table 2.11-1 summarizes some of the pollutants of concern for the Dominguez Channel and Los Angeles Harbor. The Dominguez Watershed has no prescribed Total Maximum Daily Loads (TMDLs) in effect at this time. The Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) became in effect March 10, 2005. Caltrans is not a responsible party. Target Design Constituents (TDCs) identified for receiving water bodies (Los Angeles/Long Beach Inner Harbor) generated by roadway surfaces are Total Copper, Dissolved Copper, Total Zinc, Dissolved Zinc, and Sediment.

**Table 2.11-1
Pollutants of Concern of the Dominguez Channel and Los Angeles Harbor**

Water Body	Segment/Area	Pollutant/Stressor
Dominguez Channel	Vermont to Estuary	Chromium, lead, zinc, pesticides, dichloro-diphenyl-trichloroethane (DDT), polycyclic aromatic hydrocarbons (PAHs), benthic community effects, ammonia, bacteria
Los Angeles Harbor	Consolidated Slip	Cadmium, chromium, copper, lead, mercury, nickel, zinc, pesticides, DDT, polychlorinated biphenyls (PCBs), PAHs, toxaphene, sediment toxicity, benthic community effects
	Fish Harbor	DDT, PCBs, PAHs
	Southwest Slip	DDT, PCBs, sediment toxicity
	Main Channel	Copper, zinc, DDT, PCBs, PAHs, sediment toxicity, beach closures
	Inner Breakwater	DDT, PCBs, PAHs
	Cabrillo Beach (inner)	DDTs, PCBs, beach closures

Source: RWQCB.

The LARWQCB has set water quality objectives that are presented in the Basin Plan for the Coastal Watershed of Los Angeles County.

2.11.3 Environmental Consequences

2.11.3.1 Construction Impacts

No Build Alternative

No construction impacts to water quality would occur under the No Build Alternative.

Build Alternative

The major pollutant expected from construction sites is erosion related, where sediment-laden water flows into storm drains. The proposed project covers an area of more than 1-acre; therefore, an NPDES permit for stormwater discharges associated with construction activities would have to be obtained. Because the proposed project would be constructed within City and State ROW, NPDES Caltrans Statewide Permit (Order No. 99-06-DWQ) (NPDES No. CAS 000003) and Construction General Permit (Order No. 2009-0009-DWQ) (NPDES No. CAS 000002) would apply to this project. The City of Los Angeles would file a Notice of Intent (NOI) with the SWRCB at least 30 days prior to the start of construction.

An SWPPP and Monitoring Program would be prepared and implemented prior to construction activities. The SWPPP would describe structural and nonstructural BMPs to minimize or eliminate the potential for spills and leakage of construction materials and erosion of disturbed areas by water and wind. The SWPPP would identify construction-period BMPs to reduce water quality impacts. The SWPPP would emphasize: (1) temporary erosion control measures to reduce sedimentation and turbidity of surface runoff from disturbed areas; (2) personnel training; (3) scheduling and implementation of BMPs during construction and for the various seasons, noting the rainy season is from October 1 to May 1; (4) identification of non-stormwater discharge BMPs; and (5) mitigation and monitoring during construction.

The following Construction Site BMPs are expected to be implemented for this project: SS-1 Scheduling; SS-2 Preservation of Existing Vegetation; SS-5 Soil Binders; SS-8 Temporary Mulch; SS-9 Earth Dikes/Drainage Swales & Ditches; SC-1 Silt Fence; SC-5 Temporary Fiber Rolls; SC-7 Street Sweeping and Vacuuming; SC-10 Storm Drain Inlet Protection; TC-1 Stabilized Construction Entrance/Exit; NS-1 Water Conservation Practices; NS-6 Illicit Connection/Illegal Discharge Detection and Reporting; NS-8 Vehicle and Equipment Cleaning; NS-9 Vehicle and Equipment Fueling; NS-10 Vehicle and Equipment Maintenance; NS-12 Concrete Curing; WM-1 Material Delivery and Storage; WM-2 Material Use; WM-3 Stockpile Management; WM-4 Spill Prevention and Control; WM-5 Solid Waste Management; WM-8 Concrete Waste Management; WM-9 Sanitary/Septic Waste Management; WM-10 Liquid Waste Management; and Type D Erosion Control.

With the temporary Construction Site BMPs incorporated into the construction site management of the project, impacts on water quality from construction activities would be minimized.

2.11.3.2 Permanent Impacts

No Build Alternative

No permanent impacts are anticipated under the No Build Alternative.

Build Alternative

As described in the Caltrans Storm Water Management Plan (SWMP), BMPs are designed and implemented to reduce the discharge of pollutants from the Caltrans storm drain system to the maximum extent practicable (MEP). This will require the onsite drainage system to be designed with a BMP concept in place that maximizes pollutant removal.

The proposed project is considered a major reconstruction project and is located in an urban area subject to a municipal separate storm water sewer system (MS4) permit. As a result, all nine Caltrans-approved permanent Treatment BMPs have been analyzed in the SWDR. TDCs identified for the receiving water bodies (i.e., Los Angeles/Long Beach Inner Harbor) generated by roadway pollution are Total Copper, Dissolved Copper, Total Zinc, Dissolved Zinc, and Sediment. The proposed permanent treatment devices for this proposed project are five biofiltration swales that would be designed to treat up to 60 percent of the total water quality volume/flow (WQV/WQF) and 100 percent of the Net New Impervious Surface Area.

With the permanent Treatment BMPs incorporated into the proposed project, impacts on water quality from project implementation would be minimized.

2.11.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

Construction

With the temporary Construction Site BMPs incorporated into the construction site management of the project, as described in the SWDR, no further avoidance, minimization, and/or mitigation measures are required.

Permanent

With the permanent Treatment BMPs incorporated into the project, as described in the SWDR, no further avoidance, minimization, and/or mitigation measures are required.



2.12 Geology/Soils/Seismicity

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 CEQA.

This section assesses potential impacts from faulting, seismicity, and liquefaction to the proposed project. This section also discusses geology, soils, and seismic hazard concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and construction of structures. The Caltrans’ Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated maximum credible earthquake (MCE) from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

2.12.1 Affected Environment

The geologic and geotechnical conditions and subsequent conclusions presented in this section are based on the review of relevant geologic and geotechnical reports prepared for the site and the surrounding area, along with the geotechnical data collected and analyzed in the Draft Foundation Report prepared for this project during the preliminary design phase.

2.12.1.1 Regional Geology

The project site is located in the USGS San Pedro and Torrance 7.5-Minute Quadrangles in southwestern Los Angeles County, at the boundary between the Palos Verdes Hills, the wave cut terraces of eastern San Pedro, and the Los Angeles Basin within the City of Los Angeles communities of San Pedro and Los Angeles Harbor. The Los Angeles Basin, lying between the Transverse and Peninsular Ranges of southern California, is bound to the north by the Hollywood and Santa Monica faults, to the east by the Puente Hills and Santa Ana Mountains, and to the southwest by the Pacific Ocean. The Los Angeles Basin is a northwest-trending structural depression filled with Tertiary- and Cretaceous-age sedimentary formations and capped with Pleistocene- and Holocene-age alluvium.

2.12.1.2 Site Geology

Geologic and geotechnical conditions vary along the project alignment, as shown in Figure 2.12-1 and described below:

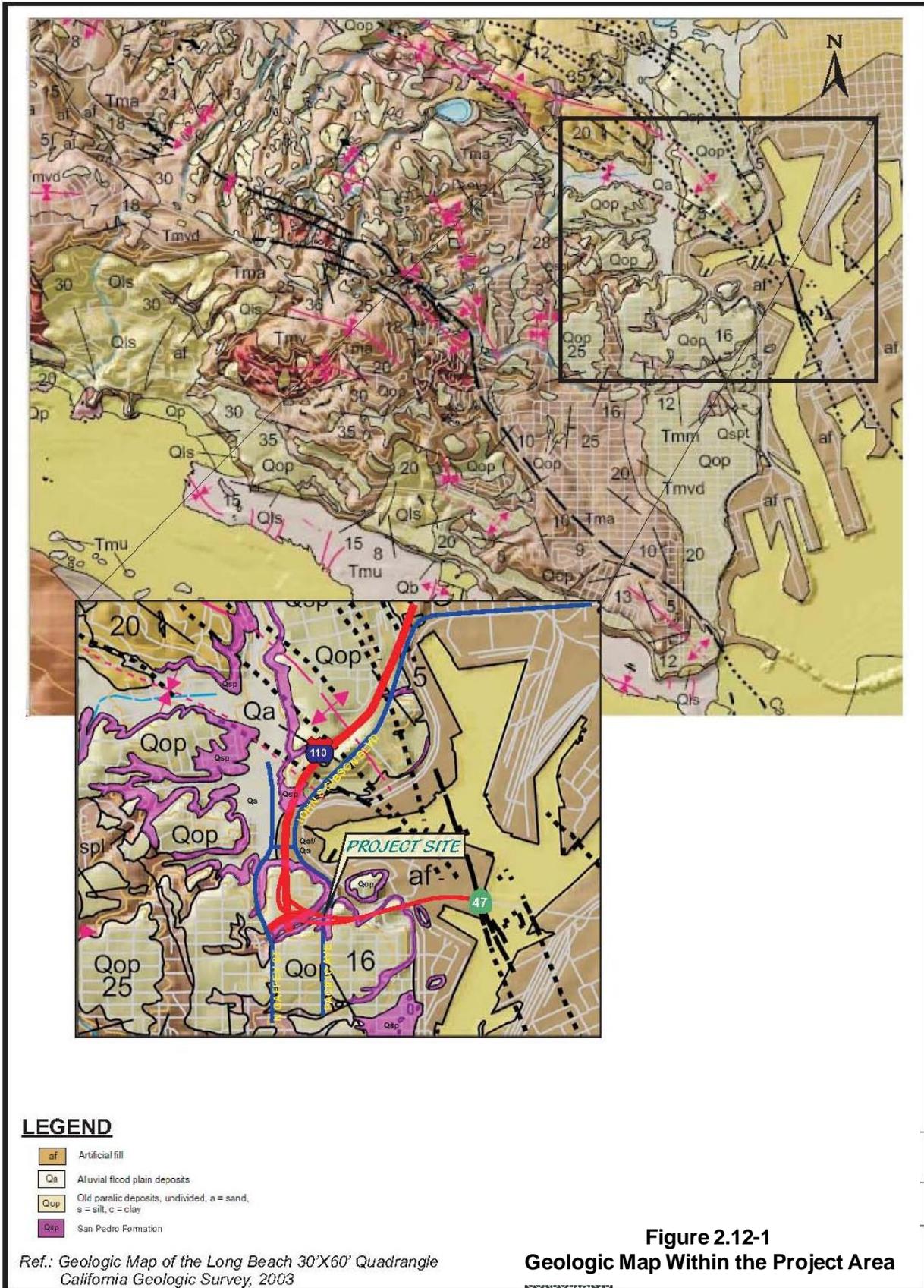


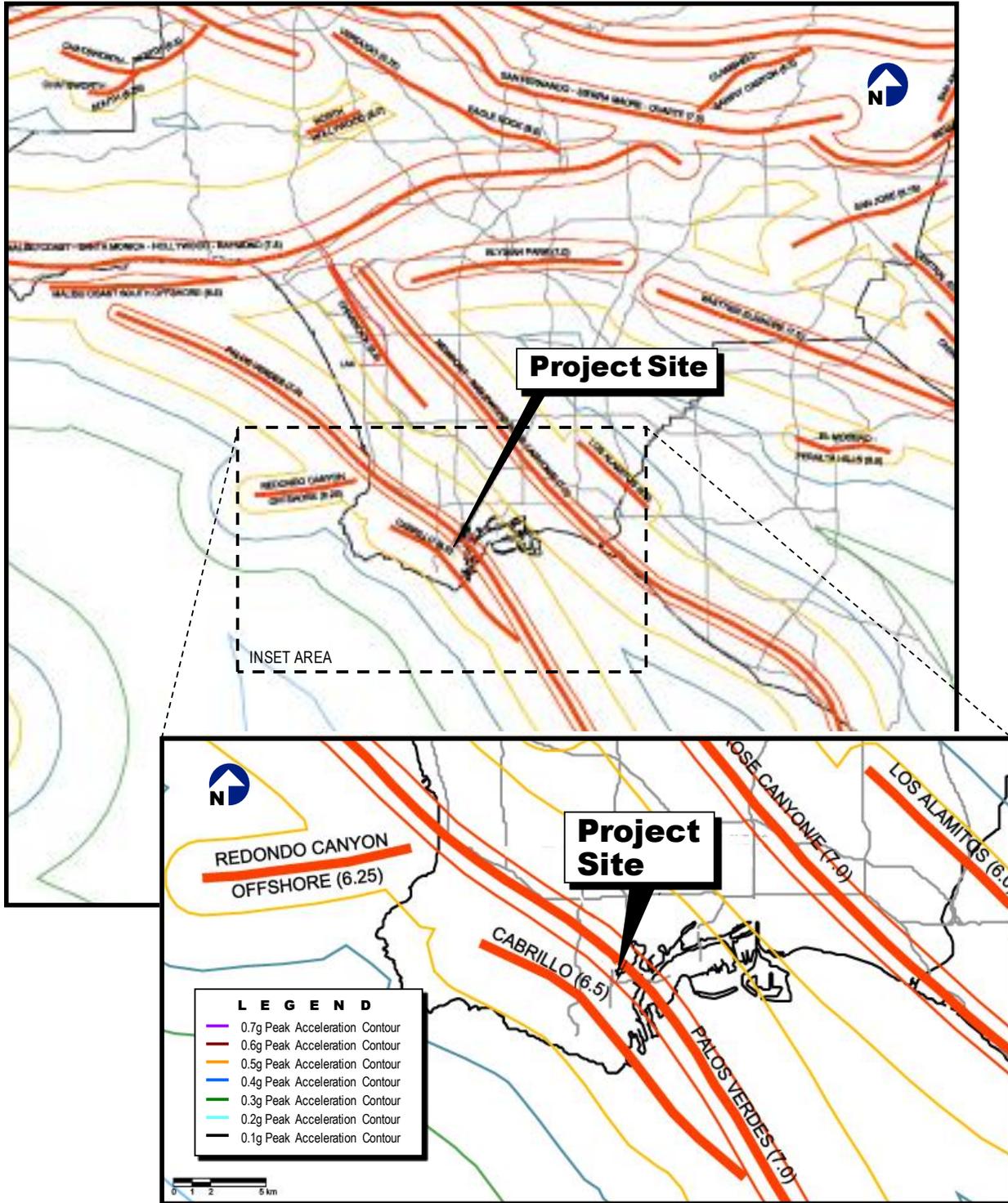
Figure 2.12-1
Geologic Map Within the Project Area

- East abutment area of Pacific Avenue Undercrossing: Underlying soils are San Pedro Formation consisting of very dense sand with silt (SP-SM). The soils are relatively strong and of low compressibility.
- Filled Canyon from Pacific Avenue west abutment extending 500 feet west: Underlying soils are up to approximately 50 feet of compacted fill overlying very stiff clayey alluvial soils.
- West end of filled canyon to 400 feet south of Channel Street Overhead South abutment: the freeway alignment is in a through-cut within dense formational soils (Qsp) at a depth of up to 40 feet below the original grades.
- South abutment approach to Channel Street Overhead: On the south end, the embankment fill overlies the dense formational soil; at the abutment location, it overlies limited thickness of stiff alluvium; and near the toe at Channel Street, the underlying alluvium transitions to a thick deposit of approximately 50 feet of very soft to medium stiff overlying denser alluvium.
- Channel Street Overhead between north and south abutments: Soils below the level of Channel Street/John S. Gibson Boulevard (near El. +10 feet) consist of mixed fill materials to approximately El. + 5 feet, below which are 50 feet of very soft to medium stiff alluvial clays and silts (with occasional thin sandy layers), underlain by denser alluvium.
- North abutment of Channel Street Overhead to NB I-110/John S. Gibson Boulevard Off-ramp/On-ramp: Soil conditions below the level of John S. Gibson Boulevard (El. 10 feet +/-) in this area are the same as the area between the north and south abutments, except that the thickness of soft clays reduces and pinches out at the north end.
- North of the on-ramp/off-ramps to north end of project: This segment of the project is in native elevated stiff/dense terrace deposits (Qop).

2.12.1.3 Seismicity

The project site is located within a seismically active region. Several active faults that could produce significant shaking are located near the site (Figure 2.12-2). According to Caltrans 1996 Seismic Hazard Map and California Geological Survey (CGS) fault data, significant faults that could cause strong shaking at the site include Palos Verdes Fault, Cabrillo Fault, Newport Inglewood-Rose Canyon Fault, Puente Hills Blind Thrust Fault, San Joaquin Hills Blind Thrust Fault, Malibu Coast-Santa Monica-Hollywood-Raymond, and Whittier-Elsinore Faults.

The Palos Verdes Fault is inferred as crossing I-110 in the northern portion of the site, north of any existing or proposed bridge or wall structures. No visible surface trace of the fault is present, and there is no evidence of historical fault rupture in this area. The site is not located within an Alquist-Priolo Special Study Zone; however, given its suspected location, surface rupture where this fault traverses the far north end of the project site is conceivably possible.



Source: Modified from Mualchin, L, 1996 "California Seismic Map 1996" California Department of Transportation

Figure 2.12-2 Fault Map within the Project Area

According to the California Building Code (2001), the project site is located in Seismic Zone 4. Seismic Zone 4 includes those areas of California that have experienced major (i.e., Richter magnitude greater than 7.0) historic earthquakes and high levels of recent seismicity. Major damage corresponding to intensities VIII or higher on the Modified Mercalli Intensity Scale should be expected within this zone.

Based on analysis with the computer program EQFAULT and the CGS 2002 Fault Model, the Palos Verdes Fault Zone, with an Epicentral distance of 0- to 1.3-km (MCE moment magnitude [Mm] = 7.0), is the controlling fault at the project site. The Palos Verdes Fault Zone is a right lateral strike slip fault. Using the Sadigh (1997) rock attenuation relationship and EQFAULT computer program, the calculated peak bedrock acceleration (PBA) was estimated to be 0.69g at Pacific Avenue and 0.71g at Channel Street Bridge, and it is as high as 0.77g at the fault location in the far northern end of the project. Corresponding calculated peak ground accelerations (PGA) using Sadigh (1997) soil attenuation relationship are 0.54, 0.54, and 0.59, respectively.

Recommended PBA for bridge design using the current Caltrans deterministic methodology is 0.7g, and design PGA is 0.54g. Seismic criteria may change due to new Caltrans policy, which is about to be implemented. The new criteria include changes in fault magnitudes and locations, and consideration of the higher of probabilistic and deterministic spectra.

2.12.1.4 Groundwater Conditions

Groundwater is present at the site generally near elevation +5 feet above MSL and may fluctuate due to tidal influence of the adjacent Los Angeles Harbor. In the low-lying areas of the site along John S. Gibson Boulevard and at the Channel Street Overhead, the groundwater table is at a relatively shallow depth of less than 10 feet and is consistent with the CGS Seismic Hazard Zone Reports for the Torrance and San Pedro 7.5-minute Quadrangles, which show the 10-foot groundwater contour in the area adjacent to the harbor. In other areas of the site, depth to groundwater is generally 20 to 100 feet below ground surface (bgs).

2.12.1.5 Liquefaction Potential

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave like a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: (1) shallow groundwater, (2) low-density sandy soils, and (3) high-intensity ground motion. Dense granular soils and cohesive soils exhibit low to negligible liquefaction potential. Effects of liquefaction on level ground include sand boils, settlement, and bearing capacity failures below structural foundations. Under sloping ground conditions, slope failure in the form of liquefaction-induced lateral spreading is possible.

Portions of the project site are mapped within a liquefaction hazard zone on the CGS Seismic Hazard Zones Map of the Torrance and San Pedro 7.5-minute Quadrangles. This map indicates that portions of the project site are located in an area where historical occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in PRC Section 2693(c) would be required.” The mapped areas include the filled canyon west of Pacific Avenue, and all of the low-lying areas adjacent to Los Angeles Harbor and between the south abutment of the Channel Street Overhead and the NB I-110 on-ramp/off-ramp at John S. Gibson Boulevard.

Site-specific information suggests that the canyon west of Pacific Avenue has deep groundwater and clayey soils and is not subject to liquefaction.

Preliminary information from the area between the south abutment of the Channel Street Overhead to the NB I-110 off-ramp intersection at John S. Gibson Boulevard suggests that most of the soils below groundwater are clays not subject to liquefaction, but that thin layers of liquefiable loose sands may be present within the clay profile, and some settlement and loss of shear strength could occur at this location. The potential extent of liquefaction settlement and loss of shear strength is currently being evaluated by further investigation.

2.12.2 Environmental Consequences

The proposed construction would entail a sliver widening of roadway and two bridges utilizing limited cut and fill mass grading, construction of pavements, and retaining walls adjacent to an existing facility. The project would not increase the existing risks of geologic hazards such as seismic shaking, fault rupture, liquefaction, soft soil, lateral spreading, slope failure, or ground settlement.

2.12.2.1 Construction Impacts

No Build Alternative

As is the case for most areas of southern California, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the project site. With the No Build Alternative, there would be no impacts from geology and soils conditions on the existing roadway facilities and existing buildings within the project area. Because the skate facility was built without any permit, it may not be built to industry standards pertaining to ground shaking activities. Therefore, the facility could be affected by the earthquakes; however, impacts to the skate facility due to ground-shaking activities are beyond the scope of this project and are not analyzed as part of this environmental document.

Build Alternative

As mentioned above, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the project site. There would be no impact to regional geologic conditions due to construction activities. Impacts due to soil disturbance (i.e., erosion and sedimentation potential) during construction are addressed in Section 2.11.3, Water Quality and Stormwater Runoff. As noted above, the skate facility could be affected by ground-shaking activities because it may not be built to industry standards; however, impacts to the skate facility due to ground-shaking activities are beyond the scope of this project and are not analyzed as part of this environmental document.

2.12.2.2 Permanent Impacts

No Build Alternative

No construction would occur under the No Build Alternative; therefore, there would be no impacts associated with geology or soils.

Build Alternative

The proposed project would not appreciably alter topography within the study area. New fill would be required mainly for widening existing roadways. To reduce any ROW impacts, some fill would be retained with walls. Most changes would occur within existing ROW and would be designed in accordance with standard engineering practices and Caltrans specifications.

Landslides

The project site is flat to gently sloping; therefore, landslides are not considered to be a hazard in this area.

Ground Shaking

To minimize geologic and seismic hazards near the project, site-specific investigations, seismic hazard engineering analyses, and engineering recommendations for retaining walls, expansive soil treatment, cuts and fills, and bridge foundation elements would be conducted during final design using Caltrans Guidelines for Geotechnical Foundation Investigations and Reports. Specifications for construction would conform to the Caltrans Standard Specifications.

As noted above, the skate facility could be affected by ground-shaking activities because it may not be built to industry standards; however, impacts to the skate facility due to ground-shaking activities are beyond the scope of this project and are not analyzed as part of this environmental document.

Lateral Spreading

Lateral spreading is a phenomenon associated with liquefaction in which lateral movement of a soil embankment occurs along a free face. The consequences could include failure of bridge abutments and exceedances of lateral capacities of the bridge pile supports. These consequences would be minimized by implementing the recommendations from the Geotechnical Report and following Caltrans Guidelines for Geotechnical Foundation Investigations and Reports. Specifications for construction would conform to the Caltrans Standard Specifications.

2.12.3 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

All project components will be designed in accordance with standard engineering practices and Caltrans standard specifications. No additional mitigation is required.



2.13 Paleontology

This section presents an overview of the efforts conducted to identify and evaluate the potential for impacts caused by the proposed project on paleontological resources. The information presented in this section is excerpted from the Preliminary Environmental Assessment Report (PEAR) and supporting Paleontological Records Check completed for this project.

2.13.1 Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. Many federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects. (e.g., Antiquities Act of 1906 [16 U.S.C. 431-433], Federal-Aid Highway Act of 1935 [20 U.S.C. 78]). Under California law, paleontological resources are protected by CEQA; CCR, Title 14, Division 3, Chapter 1, Sections 4307 and 4309; and PRC Section 5097.5.

2.13.2 Affected Environment

2.13.2.1 Paleontological Study Area

The paleontological study area includes all locations that would be subject to subsurface ground disturbance under the Build Alternative. The paleontological study area is the same as the project construction area. The hillside adjacent to the NB connector between SR 47 and I-110 and the locations of the new footings are the areas that would be subject to the most extensive ground disturbance.

2.13.2.2 Research Methods

In October 2006, a vertebrate paleontologist conducted a paleontological resources record check at the Natural History Museum of Los Angeles County to identify fossil localities in the project vicinity. A paleontological field study and further paleontological research were deemed unnecessary because the study area is fully developed.

2.13.2.3 Findings

Based upon the paleontological records check conducted at the Natural History Museum of Los Angeles County for the project study area, several vertebrate fossil localities lie within the project area and its immediate vicinity. The project area is composed of younger and older Quaternary Alluvium, some artificial fill, Late Pleistocene San Pedro Sand, and Pleistocene Palos Verdes Sand.

Within the northern parcel of the project area, artificial fill and older Quaternary Alluvium deposits are unlikely to yield significant vertebrate fossils, especially in the uppermost layers. No paleontological localities are known to be recorded in this general area.

The two conjoined southern parcels of the project are primarily composed of Late Pleistocene San Pedro Sand and older Quaternary Alluvium, sometimes considered to be non-marine Pleistocene Palos Verdes Sand. The two sands have similar lithology; therefore, they can be difficult to distinguish. Several of the vertebrate fossil localities from these units are mixed marine and terrestrial fauna, indicating they encompass both types of sand. There are two localities located in the southern parcel, LACM 3254 and 3658. Within both of these localities, extensive fish faunas have been recorded. Additionally within locality LACM 3658, fossil frog (*Bufo*), rabbit (*Sylvilagus audubonii*), woodrat (*Neotoma*), and pocket gopher (*Thomomys*) have been recorded. Just outside the southern parcel of the project area lies locality LACM (CIT) 186, which has produced a smaller mixed fossil fauna consisting of pond turtle (*Clemmys*), puffin (*Puffinus griseus*), dog (*Canidae*), sea lion (*Otariidae*), and horse (*Equus*).

There are three paleontological localities located within the middle parcel of the project area, LACM 1602, 3175, and 7504. Locality LACM 3175 is located in the southern portion of the middle parcel and has produced extensive fossil fish fauna. Locality 1602 is in the northern portion of the middle parcel and has produced substantial vertebrate fossil fauna representing marine and terrestrial environments. Also located in the northern portion of the middle parcel is LACM 7504, which contained fossil fish specimens of sculpin, stickleback (*Leptocottus armatus*), herrings (*Gasterosteus aculeatus*), surfperch (*Clupeidae*), and minnows (*Cypriniformes*). Just east of the project boundary of the middle parcel is locality LACM 1012, which produced fossil specimens of Canada Goose (*Branta canadensis*) and American Coot (*Fulica americana*). Just west of the middle parcel is LACM 1056, which contained fossil specimens of bison (*Bison*) and a whale (*Cetacea vertebra*).

Between the northern and middle parcels of the project site, there are two vertebrate localities, LACM 3262 and 3270. LACM 3262 is a younger nonmarine locality composed of Palos Verdes Sand that produced fossil specimens of pond turtle (*Clemmys*), bird (*Aves*), and mammalian carnivore (*Carnivora*). Locality LACM 3270 is an older marine locality composed of San Pedro Sand, located stratigraphically below LACM 3262, with an unconformity between the two sedimentary deposits. The only fossil specimen of fossil gray whale (*Eschrichtius*) known in the entire world was recovered from LACM 3270.

2.13.3 Environmental Consequences

2.13.3.1 Construction Impacts

No Build Alternative

No construction impacts to paleontological resources would occur under this alternative.

Build Alternative

Surface grading or shallow excavations of the younger Quaternary Alluvium exposed in much of the northern parcel, the southern portion of the middle parcel, and a small portion in the southeastern corner of the southern parcel of the proposed project area is unlikely to uncover significant fossil vertebrate remains. Deeper excavations in those areas that extend into older underlying deposits, and any excavations in the San Pedro Sand or Palos Verdes Sand deposits exposed in the more elevated portions of the proposed project area, however, have a very good chance of encountering significant vertebrate fossils.

Based on the paleontological resources records check conducted by the Natural History Museum of Los Angeles County in October 2006, surface grading of the younger Quaternary Alluvial deposits within the project site is not likely to uncover any significant vertebrate fossils; however, there is the potential to encounter significant vertebrate fossils in the deep excavation area that extends to the older Quaternary Alluvial deposits, and Palos Verdes and San Pedro Sand deposits. Therefore substantial excavations in the APE should be monitored closely to quickly and professionally recover any fossil remains discovered.

Excavation, grading, and construction could potentially result in the permanent loss of paleontological resources including (1) an undetermined number of unrecorded fossil sites in the other alluvium and San Pedro and Palos Verdes Sands; (2) scientifically important fossil remains; (3) associated fossil specimen data and corresponding geologic and geographic site data; and (4) the fossil-bearing strata. With the implementation of paleontological monitoring and rock sampling during ground-disturbing activities, permanent impacts to paleontological resources uncovered within the proposed project site would be avoided.

2.13.3.2 Permanent Impacts

No Build Alternative

No permanent impacts to paleontological resources would occur under the No Build Alternative.

Build Alternative

No permanent impacts to paleontological resources would occur under the Build Alternative.

2.13.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

Construction

The following measures shall be implemented to minimize potential impacts to paleontological resources:

- MM PAL-1 The LAHD shall retain a qualified paleontologist prior to the start of construction to develop and implement a Paleontological Mitigation Plan. Paleontological monitoring shall be conducted onsite to inspect new exposures created by earth-moving activities in areas underlain by the older alluvium and at depths greater than 5 feet below current grade for the younger alluvium. Rock samples from rock units in the San Pedro and Palos Verdes Sand shall be collected and analyzed for the paleontological potential.
- MM PAL-2 If any fossils are found, then excavation activities shall be temporarily halted to allow samples to be collected and analyzed for paleontological potential. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution.

Permanent

No avoidance, minimization, and/or mitigation measures are required



2.14 Hazardous Waste/Materials

2.14.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

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

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

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

Hazardous waste in California is regulated primarily under the authority of the federal RCRA and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous materials is vital if it is disturbed during project construction.

2.14.2 Affected Environment

An Initial Site Assessment (ISA) covering the project site was prepared in January 2007 (GDC, 2007). An Addendum to the ISA was prepared in January 2009 (GDC, 2009a). The ISA and

Addendum were prepared in accordance with American Society for Testing and Materials (ASTM) E-1527-05 guidelines and Caltrans *Project Development Procedures Manual*. The scope of the ISA (or Phase I study) included site reconnaissance; historical research related to use, storage, disposal, or release of hazardous materials or petroleum hydrocarbons; review of environmental databases; and report of findings.

Following the Phase I study, a site investigation (SI or Phase II Investigation) was conducted at the potential contamination areas within the project site in early 2009 (GDC, 2009b). A summary of findings is presented in the subsections below. Note that the site investigation activity does not cover the areas along the property lines of the residence along the west side of I-110 and the south side of SR 47 where soundwalls were later proposed for construction to abate future traffic noise from the freeway. Soil sampling and analysis at these areas were conducted in early 2011, the results of which are included in this environmental document.

2.14.2.1 Review of Environmental Data Resources, Inc. (EDR) Report

There are 214 sites within ASTM 1527-05 Standard search distances from the project site that have been identified in the environmental databases. These results are summarized in Table 2.14-1. Several facilities are listed in multiple databases. Two Recognized Environmental Conditions (RECs) are identified within the project study area (Figure 2.14-1). REC means ~~the~~ presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

One REC for the project is residual groundwater contamination from multiple sources. Two sites with leaking underground storage tanks (LUSTs) that impacted groundwater are located in close vicinity (approximately 500 feet) to the Channel Street overcrossing improvement. These two sites are the Arco Gas Station #3069, located at 701 Channel Street, and the Chevron Gas Station #9-9717, located at 1105 Gaffey Street. The Arco Gas Station reported a leaking tank in 2001. Pollution categorization is ongoing. The Chevron Gas Station discovered a leaking gasoline tank in 1986. The case was closed in 1996; however, the residual groundwater contamination is an environmental concern.

The second REC for the project concerns a spill of 200 barrels of oil due to an 8-inch pipeline gasket failure that occurred in 1991 on I-110 approximately 0.5-mile north of the I-110 Channel Street exit (at the northern limit of the proposed project). The spill was washed out in the storm drain. Remedial action called for the soil to be excavated; however, no additional records were found to indicate that the cleanup occurred. As a result, the soil in the upper few feet within the construction zone of the proposed project may be contaminated with petroleum products.

**Table 2.14-1
Summary of Environmental Database Search Results**

Database	Search Radius	Onsite	Within 1/4-Mile	Total
CERC-NFRAP	0.25		1	1
RCRA-LQG	0.25		2	2
RCRA-SQG	0.25		18	18
ERNS	0.25		8	8
HMIRS	0.25		2	2
TSCA	0.25		1	1
ICIS	0.25		3	3
FINDS	0.25		20	20
SWF/LF	0.25		2	2
CA WDS	0.25		3	3
Cortese	0.25	1	5	6
LUST	0.25	1	7	8
CA FID UST	0.25		20	20
UST	0.25		9	9
HIST UST	0.25		12	12
AST	0.25		1	1
SWEEPS UST	0.25		17	17
CHMIRS	0.25		3	3
VCP	0.25		1	1
DRYCLEANERS	0.25		1	1
CDL	0.25		1	1
HAZNET	0.25		56	56
EMI	0.25		17	17
ENVIROSTOR	0.25		2	2
TOTALS:	--	2	212	214
CERC-NFRAP – Comprehensive Environmental Response Compensation and Liability Information System – No Further Remedial Action Planned RCRA-LQG – Resource Conservation and Recovery Act – Large Quantity Generator RCRA-SQG – Resource Conservation and Recovery Act – Small Quantity Generator ERNS – Emergency Response Notification System HMIRS – Hazardous Material Information Reporting System TSCA – Toxic Substance Control Act ICIS – Integrated Compliance Information System FINDS – Facility Index System/Facility Registry System SWF/LF – Solid Waste Information System/Landfill CA WDS – California Water Resources Control Board – Waste Discharge System Cortese – “Cortese” Hazardous Waste & Substances Sites List LUST – Leaking Underground Storage Tank Incident Reports CA FID UST – Facility Inventory Database Underground Storage Tank UST – Underground Storage Tank HIST UST- Historical Underground Storage Tank AST – Aboveground Storage Tank Database SWEEPS UST – Statewide Environmental Evaluation and Planning System Underground Storage Tank CHMIRS – California Hazardous Material Incident Report System VCP – Voluntary Cleanup Program Properties DRYCLEANERS – List of Dry Cleaners CDL – Clandestine Drug Labs HAZNET – Hazardous Waste Information System EMI – Emissions Inventory Data ENVIROSTOR – EnviroStor Database				

Source: GDC, 2009a.

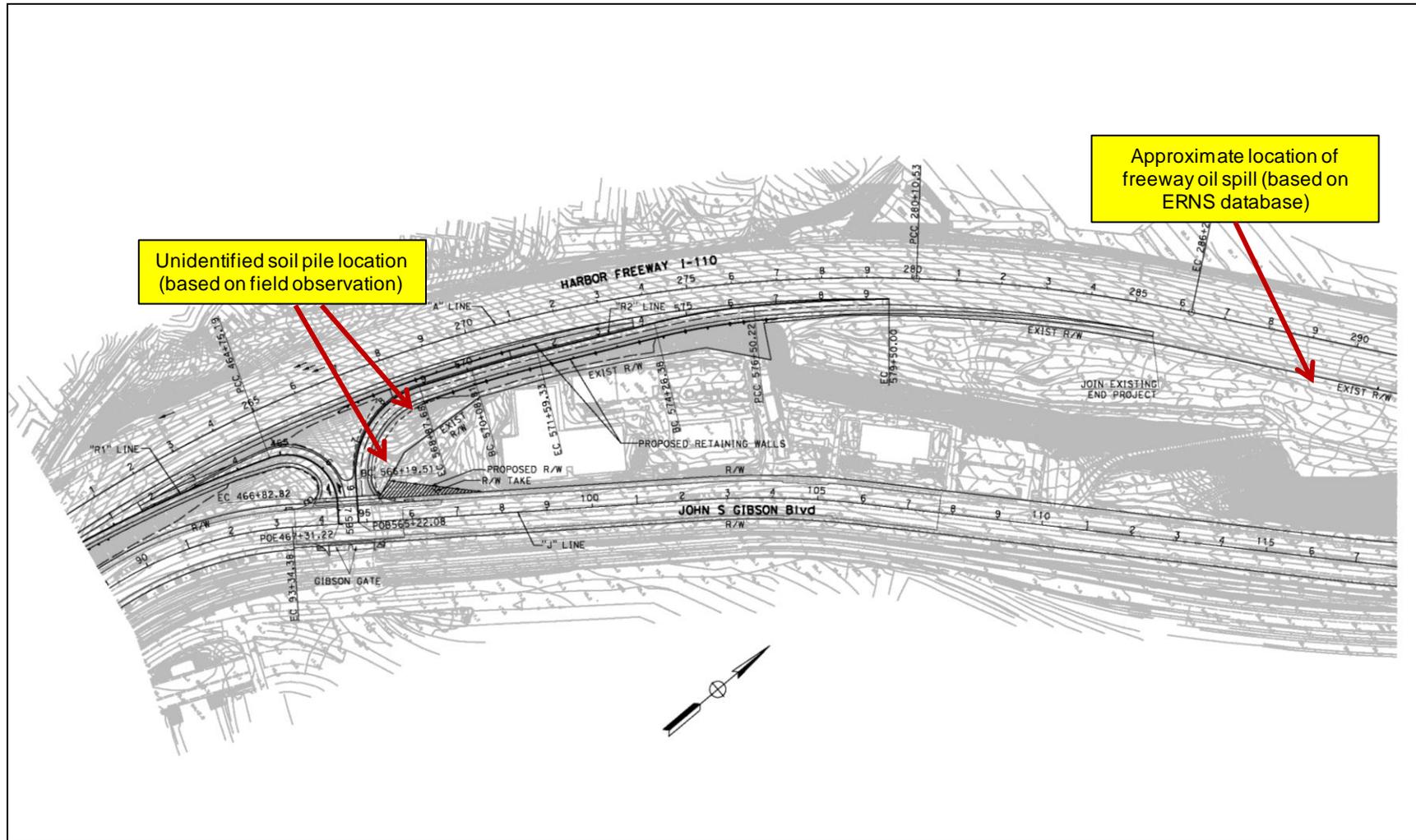


Figure 2.14-1 Location of Identified RECs

Other conditions of concern identified in the ISA and the Addendum included possible aerially deposited lead (ADL) along the unpaved areas along SR 47 and I-110; possible use of pesticides and herbicides in landscaped areas along the project area; and unknown sources of debris piles located within a fenced area of a communications tower and on the Channel Street on-ramp to I-110.

2.14.2.2 Review of Sanborn Maps

A search of Sanborn[®] fire insurance maps was conducted for the project site as part of the ISA. Coverage was found for the following years: 1921, 1950, and 1969 in the area of the SR 47/I-110 Connector. No coverage was available for the rest of the project location.

The map from 1921 shows the area of the SR 47/I-110 Connector to be unoccupied except for a few residential/commercial dwellings. The map from 1950 shows a few more residential homes than the 1921 map. The map from 1969 shows more residential homes than the 1950 map. Some of the properties have garages adjacent to them.

2.14.2.3 Site Reconnaissance

Site reconnaissance was conducted as part of the ISA and as part of the Addendum to the ISA. During the site reconnaissance, no obvious indications of hazardous substances were observed in the project site; however, a pile of concrete debris and other construction debris was located within a fenced area of a communications tower with an equipment room. Two piles of soils were also located on the NB I-110 Channel Street on-ramp. The source of the soils is unknown, so this represents an REC for the project location.

During the site reconnaissance, several power line poles were observed to have transformers. No leakage was observed during the site visit. No other equipment or materials possibly containing polychlorinated biphenyls (PCBs) were observed. No indications of asbestos-containing materials (ACMs) were observed at the project site. Instances of solid waste were observed at the site. Small miscellaneous trash was located at the bottom of the slope at the Channel Street off-ramp and along the NB I-110 on-ramp. Based on available information, no portion of the project site is or was designated as a solid waste disposal site.

During the site reconnaissance, no indications of lead-based paint (LBP) were observed within the project site. ADL is common in the immediate vicinity of freeways and highways. Because the project site is adjacent to I-110 and SR 47, the probability of ADL on the project site located near the freeway is high.

Several parts within the project site were observed to be landscaped. These areas may have been treated with pesticides for weed control. It is possible that pesticide and herbicide residues may be found in the shallow topsoil in trace concentrations.

2.14.2.4 Site Investigation

Based on the findings of the ISA and the Addendum to the ISA, a Site Investigation (SI or Phase II Investigation) was conducted in 2009 (GDC, 2009b) to determine the level of surface and subsurface contamination at the potentially contaminated areas. The SI consisted of collecting soil samples from 14 locations and a groundwater sample from a temporary well, as summarized in Table 2.14-2 (see Figure 2.14-2). The soil samples were collected mostly from depths ranging from approximately 0.5-foot to a maximum of 3 feet bgs. Samples were analyzed for total lead, soluble lead (soluble threshold limit concentration [STLC], STLC-DI, and Toxicity Characteristic Leaching Procedure [TCLP]), organochlorine pesticides, organophosphorus compounds, chlorinated herbicides, total petroleum hydrocarbon (TPH) and volatile organic compounds (VOCs). The groundwater sample was tested for TPH and VOCs. The detailed sample collection locations and analytical results can be found in the Site Investigation Report (GDC, 2009b).

**Table 2.14-2
Summary of Location and Sampling Depth**

Borehole ID No.	Borehole Location	Sampling Depths (feet)
HA-1	Approximately 125 feet west of Pacific Avenue on north side of SR 47	0.5, 1, 1.5, 2
HA-2	Approximately 125 feet east of Pacific Avenue on north side of SR 47	0.5, 1, 1.5, 2
HA-3	Approximately 300 feet west of MacArthur Avenue on south side of SR 47	0.5, 1, 1.5, 2
HA-4	East side of SR 47 on-ramp to I-110 on south side of MacArthur Avenue	0.5, 1, 1.5, 2
HA-5	Approximately 175 feet north of MacArthur Avenue on east side of I-110	0.5, 1, 1.5, 2
HA-6	Approximately 175 feet north of HA-5 (approximately 250 feet north of MacArthur Avenue) on east side of I-110	0.5, 1, 1.5, 2
HA-7	Approximately 175 feet south on I-110 off-ramp at John S. Gibson Boulevard on north side of John S. Gibson Boulevard	0.5, 1, 1.5, 2, 3
HA-8	Approximately 200 feet south on I-110 off-ramp at John S. Gibson Boulevard between I-110 mainline and I-110 off-ramp	0.5, 1, 1.5, 2
HA-9	Approximately 75 feet south on I-110 off-ramp at John S. Gibson Boulevard on east side of I-110 off-ramp	0.5, 1, 1.5, 2
HA-10	North side of I-110 on-ramp at John S. Gibson Boulevard	0.5, 1, 1.5, 2
HA-11	Approximately 100 feet west of John S. Gibson Boulevard on east side of I-110 on-ramp	0.5, 1, 1.5, 2
HA-12	Approximately 800 feet north of I-110 on-ramp and John S. Gibson Boulevard at merge point of I-110 on-ramp and I-110 mainline	0.5, 1, 1.5, 2
HA-13	Approximately 225 feet north of HA-12 on east side of I-110 mainline	0.5, 1, 1.5, 2
HA-14	Approximately 225 feet north of HA-13 on east side of I-110 mainline	0.5, 1, 1.5, 2, 3

Source: GDC, 2009b.

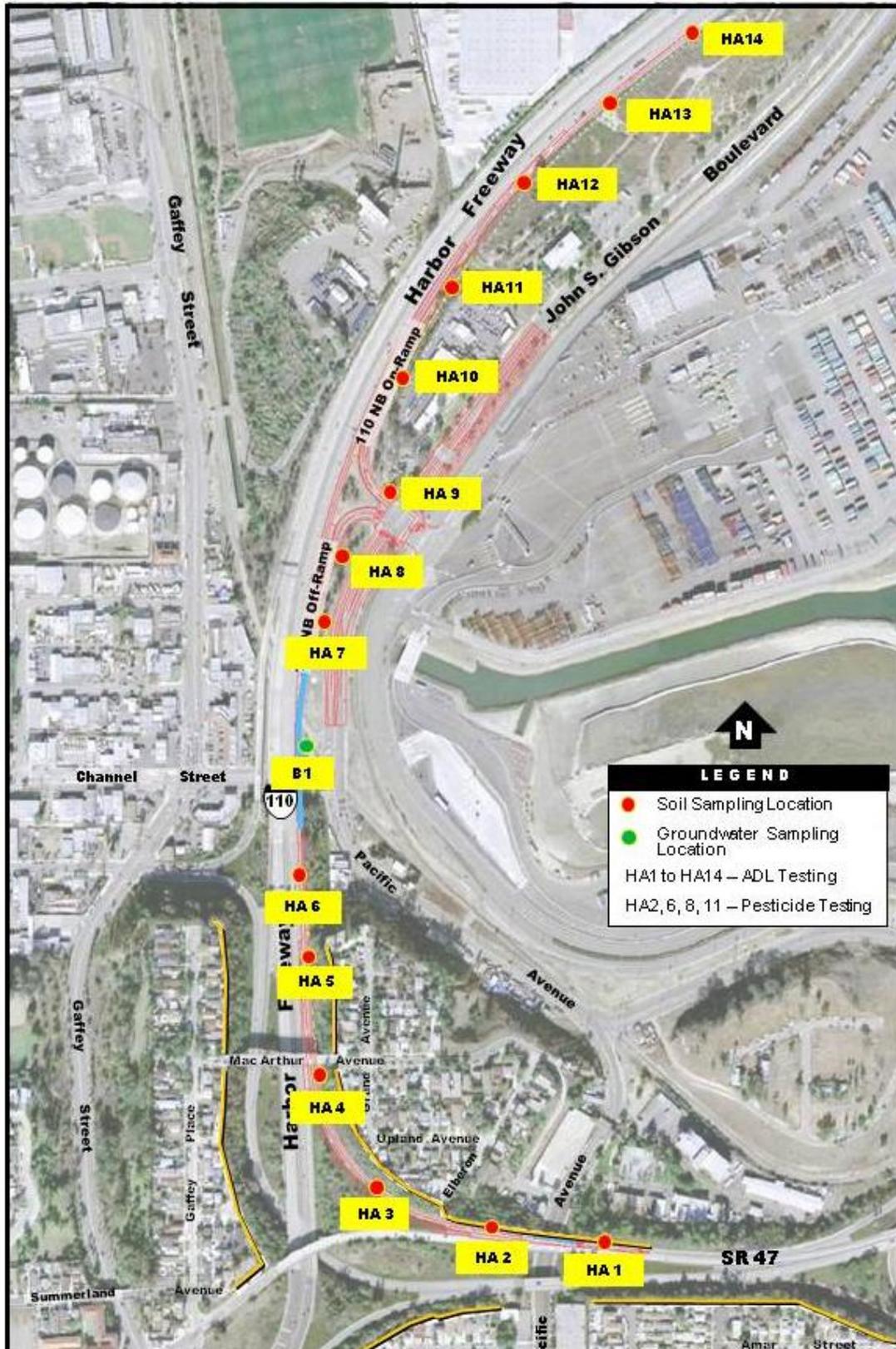


Figure 2.14-2 Hazardous Materials Sampling Location

The results of the laboratory analysis of soil and groundwater samples are summarized below.

- **Total Lead:** Fifty-seven (57) soil samples were analyzed for total lead using EPA Method 6010B. Total lead concentrations ranged from below laboratory detection limits (2.5 milligrams per kilogram [mg/kg]) to 1,320 mg/kg. Fifty-three (53) samples were below 500 mg/kg. The remaining 4 samples were between 685 and 1,320 mg/kg.
- **Soluble Lead STLC (WET-Citrate) and STLC-DI (WET-DI):** Fifteen (15) soil samples that contained total lead in excess of 50 mg/kg were analyzed for soluble lead using the STLC (WET-Citrate) and STLC-DI (WET-DI) methods. The results ranged from 3.13 milligrams per liter (mg/L) to 88.3 mg/L for the STLC method. None of the samples analyzed by the STLC-DI method were above the laboratory detection limit (0.05 mg/L).
- **TCLP:** Three samples were analyzed for lead concentrations using the TCLP method, all with reported total lead in excess of 1,000 mg/kg. TCLP concentrations ranged from 0.36 mg/L to 1.57 mg/L. None of the soil samples analyzed by the TCLP method exceeded the limit of 5.0 mg/L.
- **Pesticides and Herbicides:** Eight samples were analyzed for organochlorine pesticides, organophosphorus compounds, and chlorinated herbicides. None of the soil samples analyzed were reported above laboratory detection limits for organophosphorus or chlorinated herbicides. Except for the sample obtained at HA-9-2, one or more of the following compounds were reported in trace concentrations in all other samples analyzed: chlordane, dichloro-diphenyl-dichloroethane (DDD), dichloro-diphenyl-dichloroethylene (DDE), and dichloro-diphenyl-trichloroethane (DDT).
 - Chlordane ranged from 2.78 to 8.55 micrograms per kilogram ($\mu\text{g}/\text{kg}$). The industrial soil screening level is 6,500 $\mu\text{g}/\text{kg}$.
 - DDD ranged from 1.60 to 73.4 $\mu\text{g}/\text{kg}$. The industrial soil screening level is 7,200 $\mu\text{g}/\text{kg}$.
 - DDE ranged from 3.8 to 209.0 $\mu\text{g}/\text{kg}$. The industrial soil screening level is 5,100 $\mu\text{g}/\text{kg}$.
 - DDT ranged from 3.32 to 2,030 $\mu\text{g}/\text{kg}$. The industrial soil screening level is 7,000 $\mu\text{g}/\text{kg}$.
- **TPH and VOCs:** Soil samples collected in the upper 3 feet from boring HA-14 were tested for TPH gasoline/diesel by EPA Test Method 8015M and VOCs by EPA Test Method 8260. Based on the laboratory test results, VOCs and TPH as gasoline and light hydrocarbons were not detected above laboratory detection limits in any of the samples analyzed. Total concentrations of TPH as diesel and heavy hydrocarbons ranged between 69.5 and 259 mg/kg in the upper 1-foot. TPH as diesel and heavy hydrocarbons were not detected in samples below 1-foot.

The groundwater sample collected from the temporary groundwater monitoring well was tested for TPH gasoline/diesel and VOCs. VOCs and TPH as gasoline and light hydrocarbons were not detected in the groundwater sample. The total concentration of TPH as diesel and heavy hydrocarbons is below the laboratory practical quantification limit and is considered negligible.

2.14.2.5 Supplemental Site Investigation

A Supplemental Site Investigation was performed at the area where additional soundwalls (see details of additional soundwall in Section 2.16.4 of this IS/EA) would be constructed on the west side of I-110 and south side of SR 47 (GDC, 2011). Main focus of the site investigation was to determine if any chemicals of concern have been spilled and/or released on the proposed soundwall construction areas from adjacent residential homes, or if traces of herbicides or pesticides used as per of landscaping practices can be found in concentrations above the regulatory limits. The area of concern subject to investigation was in the upper 2.5 feet bgs which will be disturbed during construction of the pile caps.

Field investigation and sample collection was conducted on January 26, 2011. A total of 11 borings (HA-10-01 to HA-10-11) were completed with a hand auger and averaged 2.5 feet in depth which corresponds to the zone of future soil disturbance of the proposed soundwall foundation excavation. Location of the borings is presented in Figure 2.14-3.

The following analytical analyses were performed on the various samples: CAM 22 Title metals, organochlorine pesticides, and chlorinated herbicides. The results of the laboratory analysis of soil and groundwater samples are summarized below.

- **CAM Title 22 Metals:** CAM Title 22 Metals tests were performed on all collected samples. The reported metal concentrations were compared with regulatory threshold values and also California Office of Environmental Health Hazard Assessment (OEHHA) soil screening concentrations. Except for the following, none of the metals were evaluated to exceed any of the threshold criteria or the screening concentrations:
 - Arsenic was reported in one sample (HA-10-09-0.5) at 16.3 mg/kg. This is higher than the concentration that is typically used for soil screening (12 mg/kg). Arsenic was reported above laboratory detection limits for 12 out of 24 samples analyzed. The mean concentration was calculated to be 4.28 mg/kg and the 95% Upper Confidence Limit (UCL) on the mean is 6.74 mg/kg. Based on this finding, the isolated arsenic concentration for one sample is not considered a concern.

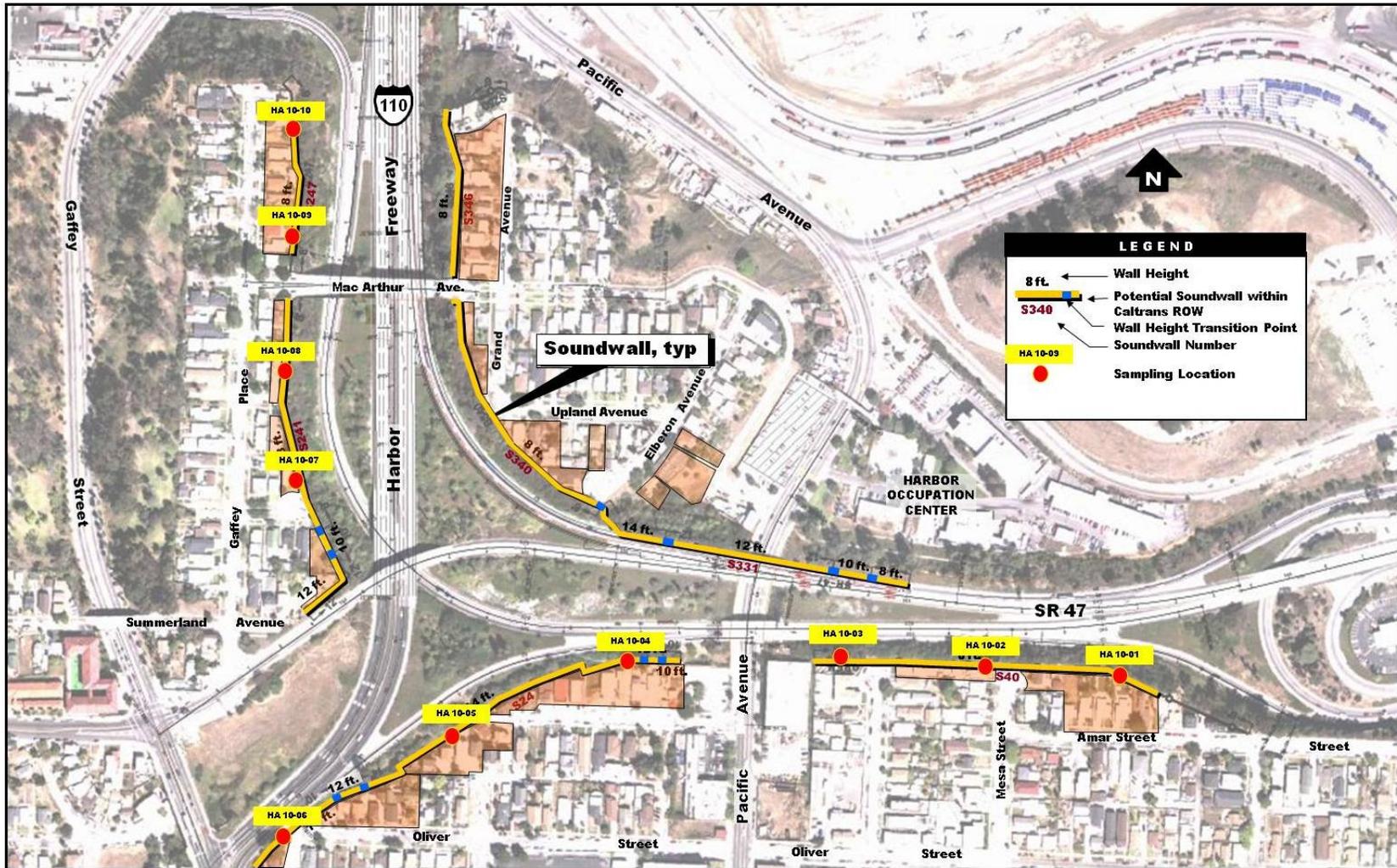


Figure 2.14-3 Supplemental Hazardous Materials Sampling Location

- Lead was reported above laboratory detection limits for 22 of the 24 samples analyzed (8.33 percent non-detect). The mean lead concentration is 45.34 mg/kg. The 95% UCL on the mean was calculated using the PROUCL software recommended by EPA as well as descriptive statistics for lead. A 95% KM (Chebyshev) UCL is recommended and is calculated to be 87.16 mg/kg. Soluble lead analyses using WET and deionized water were performed on all eight samples where the total lead was analyzed to be in excess of 50 mg/kg. A linear regression correlation for lead and soluble lead is done using NCSS statistics software. Using the identified correlation, WET analysis soluble lead concentration of 5 mg/L (California hazardous waste standard) would be exceeded for total lead concentration in excess of 114.7 mg/kg.

None of the samples analyzed exceeded the California OEHHA soil screening concentration of 320 mg/kg. In addition, the 95% UCL on the mean (87.16 mg/kg) is less than the concentration (114.7 mg/kg) where the soil would classify as a California hazardous waste.

- **Pesticide and Herbicide:** Pesticide and herbicide testing was performed on total of 7 selected soil samples collected in the upper 0.5 feet from 7 borings (labeled as HA-10-01, HA-10-03, HA-10-04, HA-10-06, HA-10-08, HA-10-09 and HA-10-10). Pesticides and herbicides are not expected to be found at deeper depth. No chlorinated herbicides were reported above laboratory detection limits in the soil samples analyzed. Six organochlorine pesticides were reported for one or more samples of soil analyzed as follows:
 - Total chlordane (alpha and gamma) was reported in 3 of 7 samples analyzed ranging from 4.1 to 24.3 µg/kg. The mean for the samples was calculated to be 11.5 µg/kg and the 95% UCL of 39.1 µg/kg. These concentrations are well below the California OEHHA industrial soil screening level of 1,700 µg/kg.
 - DDD was reported in 6 of 7 samples analyzed ranging from 1.4 to 7.7 µg/kg. The mean for the samples was calculated to be 3.9 µg/kg and the 95% UCL of 7.0 µg/kg. These concentrations are well below the California OEHHA industrial soil screening level of 9,000 µg/kg.
 - DDE was reported in all samples analyzed ranging from 1.7 to 32.0 µg/kg. The mean for the samples was calculated to be 8.8 µg/kg and the 95% UCL of 18.9 µg/kg. These concentrations are well below the California OEHHA industrial soil screening level of 6,300 µg/kg.
 - DDT was reported in all samples analyzed ranging from 2.8 to 130.0 µg/kg. The mean for the samples was calculated to be 34.5 µg/kg and the 95% UCL of 75.1 µg/kg. These

concentrations are well below the California OEHHA industrial soil screening level of 6,300 µg/kg.

- Dieldrin was reported in 2 of 7 samples analyzed ranging from 2.4 to 10.6 µg/kg. The mean for the samples was calculated to be 6.5 µg/kg and the 95% UCL of 58.5 µg/kg. These concentrations are well below the California OEHHA industrial soil screening level of 130 µg/kg.
- Heptachlor epoxide was reported in one sample at 2.16 µg/kg. This concentration is well below the California OEHHA industrial soil screening level of 520 µg/kg.

The highest concentration of these compounds can best be described as trace to small. These concentrations are not uncommon in shallow surface soil in the Los Angeles Basin and are not considered a concern. Therefore, there is no concern relating to the presence of these soils on-site and their re-use at the site.

2.14.3 Environmental Consequences

2.14.3.1 Construction Impacts

No Build Alternative

There would be no construction impacts associated with hazardous wastes/materials under the No Build Alternative.

Build Alternative

Hazardous Waste Facilities

Based on the review of the environmental databases, site reconnaissance, and historical research, there are many hazardous waste sites within the required search distances of the project limits (see Table 2.14-1). Based on the nature and status of the listings, most of these sites are not considered RECs for the proposed project.

Two sites with LUSTs that impacted groundwater are located in close vicinity (approximately 500 feet) to the Channel Street overcrossing improvement. These two sites are the Arco Gas Station #3069, located at 701 Channel Street, and the Chevron Gas Station #9-9717, located at 1105 Gaffey Street. In addition, a pipeline leak in 1951 resulted in a spill of 200 barrels of oil to the storm drain. As a result, the soil in the upper few feet within the construction zone of the proposed project may be contaminated with petroleum products. Results of the SI revealed small amounts of ADL, pesticide and herbicide, and TPH-diesel contamination in a few samples of soil and groundwater at the project site. Soil and groundwater analysis would be required prior to any soil disposal and groundwater dewatering activities to ensure proper handling and disposal of contaminated soil and groundwater.

Aerially Deposited Lead

Total Lead: None of the samples analyzed were reported to contain lead exceeding the Caltrans Soil Classification Y-1 threshold of 1,411 mg/kg.

Soluble Lead STLC (WET-Citrate): A linear regression analysis was performed to correlate the results to total lead analyses. According to the log-transformed correlation, soil that contains total lead concentrations in excess of 96 mg/kg would also contain soluble lead in excess of 5 mg/L. Only soil in the upper 6 inches of the project site exceeds the threshold.

STLC-DI (WET-DI): Because none of the soil was above the detection limit, none of the soil exceeds the total lead threshold of 1,000 mg/kg; therefore, the soil classification is still Caltrans Y-1 for the upper 18 inches.

TCLP: None of the samples exceeded the TCLP method limit of 5.0 mg/L; therefore, there is no RCRA-impact to the management of this soil.

Pesticides and Herbicides

The highest concentrations of the pesticides and herbicides were approximately 30 percent of the concentration considered a concern. Therefore, there is no issue relating to the presence of these soils onsite and their reuse at the site; however, if the soil is transported offsite, then it would require proper disposal as a California nonhazardous waste because of the presence of trace concentrations of chlorinated pesticides.

TPH and VOCs

Typically, soils containing TPH as diesel and heavy hydrocarbons below 1,000 mg/kg are not considered actionable. However, a spill was reported in the area, and sampling at one location may not be sufficient to characterize the soil; therefore, it is recommended that any soil excavated from the upper 2 feet of the northern 1,000 feet of the alignment be stockpiled separately, sampled, and tested for TPH before being reused or disposed offsite.

CAM Title 22 Metals

Based on an evaluation of the soils for metals, there is no concern relating to the presence of metals in the soil and the soil may be re-used at the site. Soil at depth greater than 2.5 feet was not sampled and/or analyzed during this investigation as the nature of the soil impacts were surficial. The sampling results confirm this assumption. However, soil excavated during the drilling of Cast in Drilled Hole (CIDH) piles should be stockpiled, and the stockpiled soil sampled and analyzed for CAM Title 22 Metals. One sample should be collected as a composite from the stockpile from a minimum of three different areas for every 100 cubic yards of soil. The results of these analyses would allow proper off-site disposal and/or re-use.

2.14.3.2 Permanent Impacts

No Build Alternative

There would be no permanent impacts associated with hazardous wastes/materials under the No Build Alternative.

Build Alternative

Once construction is complete, there would be no permanent impacts associated with hazardous materials and wastes as a result of implementation of the Build Alternative.

2.14.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

Construction

Impacts related to hazardous wastes/materials during construction of the proposed project would be minimized by implementation of the following measures.

- MM HM-1 Conduct soil profiling while handling soil at the project site during construction. If the soil contains contaminant concentrations that meet the definition of hazardous materials, then the contractor would be required to adhere to City of Los Angeles Standard Specifications (known as the Greenbook), which address the management of various hazardous materials and wastes consistent with federal and state of California requirements pertaining to hazardous materials and wastes management.
- MM HM-2 Collect and analyze water collected during dewatering for TPH gasoline/diesel and VOCs if a construction dewatering system is planned.
- MM HM-3 Collect soil samples from the drilling of CIDH piles and analyze for CAM Title 22 Metals per the work plan to be approved by Caltrans to determine proper off-site disposal, and/or re-use of this soil.
- MM HM-4 Dispose of any hazardous materials or wastes encountered before or during the construction phase of the project according to current regulatory guidelines.

Permanent

No avoidance, minimization, and/or mitigation measures are required.



2.15 Air Quality

This section addresses potential impacts to regional and local air quality associated with implementation of the proposed project. Air quality impacts were evaluated for short-term construction emissions and long-term operational emissions. This section is based on the *Air Quality Technical Report for the John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project (AQTR)* (Parsons, 2010). Detailed analytical methodology and modeling input and output and calculations worksheets can be found in the AQTR.

The proposed project is located in the Harbor District of Los Angeles, within the South Coast Air Basin (SCAB or Basin), which is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The SCAB includes all of Orange County; Los Angeles County, with the exception of the Antelope Valley; and the non-desert portions of Riverside and San Bernardino counties. Its terrain and geographical location determine the distinctive climate of the Basin, as the Basin is a coastal plain with connecting broad valleys and low hills. Elevations range from sea level to more than 11,000 feet above MSL. The South Coast Air Quality Management District (SCAQMD) has jurisdiction over air quality issues within the SCAB. While the SCAB has some of the most unhealthful air quality in the nation, air quality within the basin continues to show improvement.

Many statutes, regulations, plans, and policies have been adopted that address air quality issues. The project site and vicinity are subject to air quality regulations developed and implemented at the federal, state, and local levels. Plans, policies, and regulations that are relevant to the proposed project are discussed in the following sections.

2.15.1 Regulatory Setting

The Clean Air Act (CAA), as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act (CCAA) of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called national ambient air quality standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 CAA Amendments (CAAs), the Department of Transportation (DOT) cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the SIP for achieving the goals of the CAA requirements. Conformity with the

CAA takes place on two levels – first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional-level conformity in California is concerned with how well the region is meeting the standards set for CO, NO₂, O₃, and PM. California is in attainment for the other criteria pollutants. At the regional level, RTPs are developed that include all of the transportation projects planned for a region over a period of years. Based on the projects included in the RTP, an air quality model is run to determine whether implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the CAA are met. If the conformity analysis is successful, then the regional planning organization, such as the SCAG, which is the federally designated MPO responsible for transportation planning in the SCAB, and the appropriate federal agencies, such as FHWA, make the determination that the RTP is in conformity with the SIP for achieving the goals of the CAA. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then it is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project level also requires “hot-spot” analysis if an area is “nonattainment” or “maintenance” for CO and/or PM. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot-spot” analysis is essentially the same, for technical purposes, as CO or PM analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot-spot analysis. In general, projects must not cause the CO standard to be violated, and in “nonattainment” areas the project must not cause any increase in the number and severity of violations. If a known CO or PM violation is located in the project vicinity, then the project must include measures to reduce or eliminate the existing violation(s) as well.

2.15.2 Affected Environment

An air quality analysis was performed for the proposed project. Detailed methodologies, input and output data, and analytical results were presented in the AQTR.

2.15.2.1 Climate/Meteorology

The climate of the project region is categorized as Mediterranean, characterized by warm, dry summers, low precipitation, and mild winters. The average daily winter temperature is 56 degrees Fahrenheit (°F), and the average daily summer temperature is 75°F. More than two-thirds of the annual rainfall occurs from December through March, with approximately 90 percent occurring between December and April. The mean annual precipitation in the Long Beach area

over a 50-year period (1958-2007) was 11.96 inches. In nearly all months of the year, evaporation exceeds precipitation.

Topography is a major factor influencing wind direction over the project area. The predominant daily winds in the Long Beach area are onshore morning flows from the southwest at a mean speed of 7.3 mph. The afternoon and evening winds are generally northeasterly at speeds ranging from 0.2 to 4.7 mph. There is little seasonal variability in this pattern. Occasionally during autumn and winter, “Santa Ana” conditions develop from a high-pressure zone to the east to bring dry, high-velocity winds from the deserts over Cajon Pass to the coastal region. These winds, gusting to more than 80 mph, can reduce relative humidity to less than 10 percent. Generally, the worst air quality in the coastal area occurs during Santa Ana winds because they transport contaminated air from the east to the ocean.

The Palos Verdes Hills, which are located north of the project site, have a major influence on wind flow in the Port area. For example, during the afternoon southwesterly sea breeze, the Palos Verdes Hills often block this flow and create a zone of lighter winds in the inner harbor area. During strong sea breezes, this flow can bend around the north side of the hills and end up as a northwest breeze in the inner harbor area. This topographic feature also deflects northeasterly land breezes that flow from the coastal plains to northerly direction through the San Pedro Bay Ports.

The SCAB experiences frequent temperature inversions (i.e., increasing air 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 (i.e., upper) layer until the inversion layer finally breaks, which allows vertical mixing with the lower layer. This phenomenon is observed in the mid to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by mid morning.

The greatest air pollution impacts throughout the Basin occur from June through September. This condition is generally attributed to the large amount of pollutant emissions, increased sunshine, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day. O₃ concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in southern California.

2.15.2.2 Criteria Pollutants

A network of air quality monitoring stations located throughout the SCAB characterizes the air quality environment in the Basin by measuring and recording pollutant concentrations in the local ambient air. The Basin is divided into 38 source/receptor areas (SRAs), and the project is located at the boundary of SRA number 3 (Southwest Coastal Los Angeles County) and SRA number 4 (South Coastal Los Angeles County). The nearest SCAQMD air monitoring station to the project site is the North Long Beach Monitoring Station (Station No. 072), which is located at 3648 Long Beach Boulevard, approximately 6.2 miles northeast of the project site. All criteria pollutants are monitored at this station (i.e., O₃, CO, NO₂, Pb, SO₂, PM₁₀, and PM_{2.5}). Federal and state standards that have been established represent the maximum allowable atmospheric concentrations of these pollutants (see Section 2.15.3.2).

Ambient air quality data from the North Long Beach Monitoring Station (see Figure 2.15-1) for the past 4 years (2005 through 2008) are summarized in Table 2.15-1. The table includes maximum recorded pollutant levels and the number of days in each year that the pollutant level exceeded the national and state standards. Table 2.15-1 shows that exceedances of the California standards were recorded at the North Long Beach Monitoring Station for O₃ (1-hour, California standard), PM₁₀ (24-hour and annual), and PM_{2.5} (24-hour and annual) on one or more occasions from 2005 through 2008. The national standards were exceeded only for PM_{2.5} (24-hour and annual). No exceedances of either the state or national standards were recorded for SO₂, Pb, NO₂, or CO. It should be noted that the 2007 data were affected by a series of wildfires that erupted in southern California in late October 2007. This extraordinary event resulted in temporary elevated levels of particulates over a large region. As such, the highest levels in 2007 cannot be considered for a trend study.

2.15.2.3 Toxic Air Contaminants

Toxic air contaminants (TACs) consist of compounds that include metals, minerals, soot, and hydrocarbon-based chemicals. There are hundreds of different types of air toxics with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. TACs are a concern in the SCAB because of the large number of mobile sources and industrial facilities throughout the basin.

California regulates TACs through its Air Toxics Program, which is mandated in Chapter 3.5 of the Health and Safety Code – *Toxic Air Contaminants*, and Part 6 – *Air Toxics Hot Spots Information and Assessment* (H&SC Sections 39660 *et seq.* and 44300 *et seq.*, respectively).

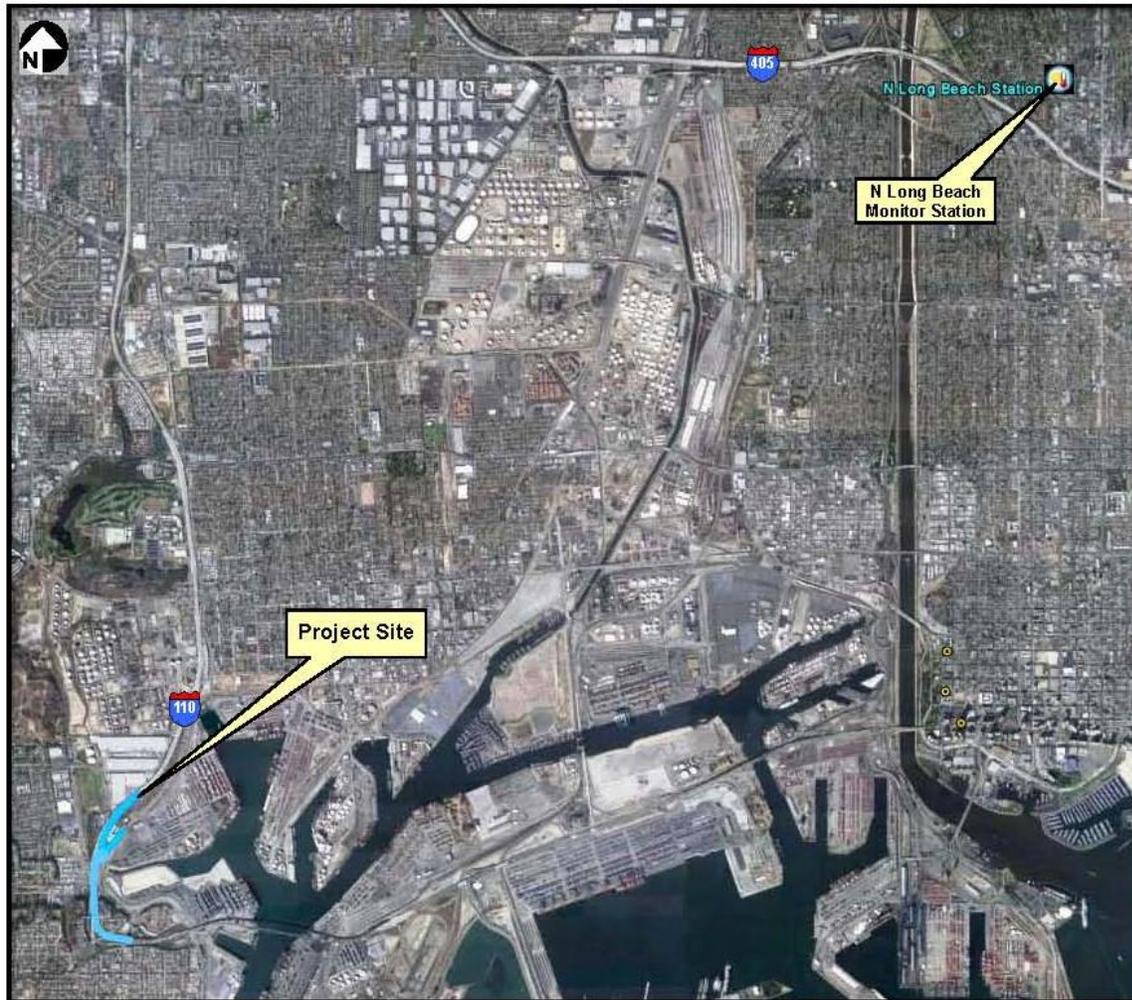


Figure 2.15-1 Location of North Long Beach Air Quality Monitoring Station

**Table 2.15-1
Criteria Air Pollutants Data Summary (North Long Beach Monitoring Station)**

Pollutant	Averaging Time	Standard	2005	2006	2007	2008
Ozone (O ₃)	(1-Hour)	Maximum Concentration (ppm)	0.09	0.08	0.1	0.09
		Days > CAAQS (0.09 ppm)	0	0	1	0
	(8-Hour)	Maximum Concentration (ppm)	0.069	0.058	0.073	0.074
		Days > 1997 NAAQS (0.08 ppm) Days > CAAQS (0.07 ppm) ^a	0	0	0	0
Particulate Matter (PM ₁₀)	(24-Hour)	Maximum Concentration (µg/m ³)	66	78	75*	62
		Days > NAAQS (150 µg/m ³)	0	0	0	0
		Days > CAAQS (50 µg/m ³)	24	30	n/a	n/a

**Table 2.15-1
Criteria Air Pollutants Data Summary (North Long Beach Monitoring Station)**

Pollutant	Averaging Time	Standard	2005	2006	2007	2008
	(Annual)	National Annual Average (50 µg/m ³) ^b	30	31	34	29
		State Annual Average (20 µg/m ³) ^b	30	31	n/a	n/a
Particulate Matter (PM _{2.5})	(24-Hour)	Maximum Concentration (µg/m ³)	54	59	83	39
		Days > 1997 NAAQS (35 µg/m ³) ^c	12	5	12	2
		3-year Average 98 th Percentile (µg/m ³) ^d	45	41	39	38
	(Annual)	Annual Arithmetic Mean (15 µg/m ³)	15.9	14.1	14.6	13.3
Carbon Monoxide (CO)	(1-Hour)	Maximum Concentration (ppm)	4.2	4.2	3.3	3.3
		Days > NAAQS (35 ppm)	0	0	0	0
		Days > CAAQS (20 ppm)	0	0	0	0
	(8-Hour)	Maximum Concentration (ppm)	3.5	3.4	2.6	2.5
		Days > CAAQS (9.0 ppm)	0	0	0	0
Nitrogen Dioxide (NO ₂)	(1-hour)	Maximum Concentration (ppm)	0.14	0.10	0.11	0.08
		Days > CAAQS (0.25 ppm) ^e	0	0	0	0
	(Annual)	Maximum Concentration (ppm)	0.024	0.022	0.021	0.019
		Days > NAAQS (0.053 ppm)	0	0	0	0
Sulfur Dioxide (SO ₂)	(24-hour)	Maximum Concentration (ppm)	0.010	0.010	0.009	0.010
		Days > CAAQS (0.04 ppm)	0	0	0	0
		Days > NAAQS (0.14 ppm)	0	0	0	0
	(Annual)	Annual Arithmetic Mean (0.03 ppm)	0.002	0.002	0.003	0.003

Exceedances shown in **bold**; CAAQS – California ambient air quality standards; ppm – parts per million; µg/m³ – micrograms per cubic meter; n/a – not available

* The data reported for 2007 represent the second high value. The first high values measured at the station are flagged as “exceptional event” and occurred on October 21, 2007, which coincides with southern California wildfires in 2007.

^a The new California 8-hour-average O₃ standard was adopted by CARB on April 28, 2005; therefore, the exceedance statistics are not applicable before this date.

^b State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.

^c Based on 2004-2006 monitored data, EPA tightened the 24-hour standard of PM_{2.5} from the previous level of 65 µg/m³. The updated area designation became effective in October 2009.

^d Attainment condition for PM_{2.5} is that the 3-year average of the 98th percentile of 24-hour concentrations at each monitor within an area must not exceed the standard (35 µg/m³).

^e NO₂ standard was amended on February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. The Office of Administrative Law approved the proposed amendments, and the new standards became effective on March 20, 2008.

Source: California Air Resource Board (CARB), 2010 - <http://www.arb.ca.gov/adam/>; and EPA, 2010 – <http://www.epa.gov/air/data/>.

The regulatory approach used in controlling TAC levels relies on a quantitative risk assessment process rather than ambient air conditions to determine allowable emission levels from the source. In addition, for carcinogenic air pollutants, there is no safe concentration in the atmosphere. Local concentrations can pose a health risk and are termed “toxic hot spots.”

The most comprehensive study on air toxics in the SCAB is the Multiple Air Toxics Exposure Study (MATES-II [2000] and MATES III [2008]) conducted by SCAQMD. The monitoring program measured more than 30 air toxics, including gaseous and particulate TACs. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region, based on emissions and weather data. MATES-II found that the maximum cancer risk in the region from carcinogenic air pollutants ranged from approximately 1,100 in a million to 1,750 in a million, with an average regional risk of approximately 1,400 in a million. The higher risk levels were found in the urban core areas in south central Los Angeles County, in Wilmington adjacent to the San Pedro Bay Ports, and near freeways. Overall, the study showed that airborne diesel particulate matter (DPM) contributed approximately 70 percent of the cancer risk. Mobile sources accounted for approximately 90 percent of the cancer risk, and industries and other stationary sources accounted for the remaining 10 percent.

The MATES-III Final Study Report was released in September 2008. The results of the MATES-III study indicate that:

- Across the Basin, the population-weighted risk was 853 in one million, approximately 8 percent lower compared to the MATES II period of 931 per million;
- The overall average lifetime risk from TACs in the Ports area experienced an approximate 17 percent increase in risk. The 2005 average population-weighted air toxics risk in the Ports area was estimated to be approximately 1,415 per million, compared with 1,208 per million lifetime cancer risk as estimated for MATES II period (1998-1999);
- Mobile source toxics account for 94 percent of risk; and
- Diesel accounts for 84 percent of air toxics risk.

Based on the finding that DPM is a significant contributor to cancer risk in the region, SCAQMD has approved fleet rules to limit diesel exhaust emitted by municipal vehicle fleets, trash trucks, street sweepers, taxis, and buses in the region. That rule is one of many measures outlined in a comprehensive plan to reduce toxic air pollution from mobile and stationary sources. Other programs to reduce diesel emissions include SCAQMD grant programs for the conversion of diesel equipment to alternative fuels.

2.15.2.4 Asbestos

According to the California Division of Mines and Geology, the proposed project location is not in an area of naturally occurring asbestos (NOA). NOA areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. These types of rocks are found only in the Catalina Island portion of Los Angeles County, and they are not present in the project area.

Based on the Initial Site Assessment (ISA) prepared for this project, no indicator of ACMs was observed by the reconnaissance team (see Section 2.14.2.3).

2.15.2.5 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the demographic characteristics of occupants and users and the activities involved. Sensitive receptors include residential areas, hospitals, elder-care facilities, rehabilitation centers, elementary schools, daycare centers, and parks.

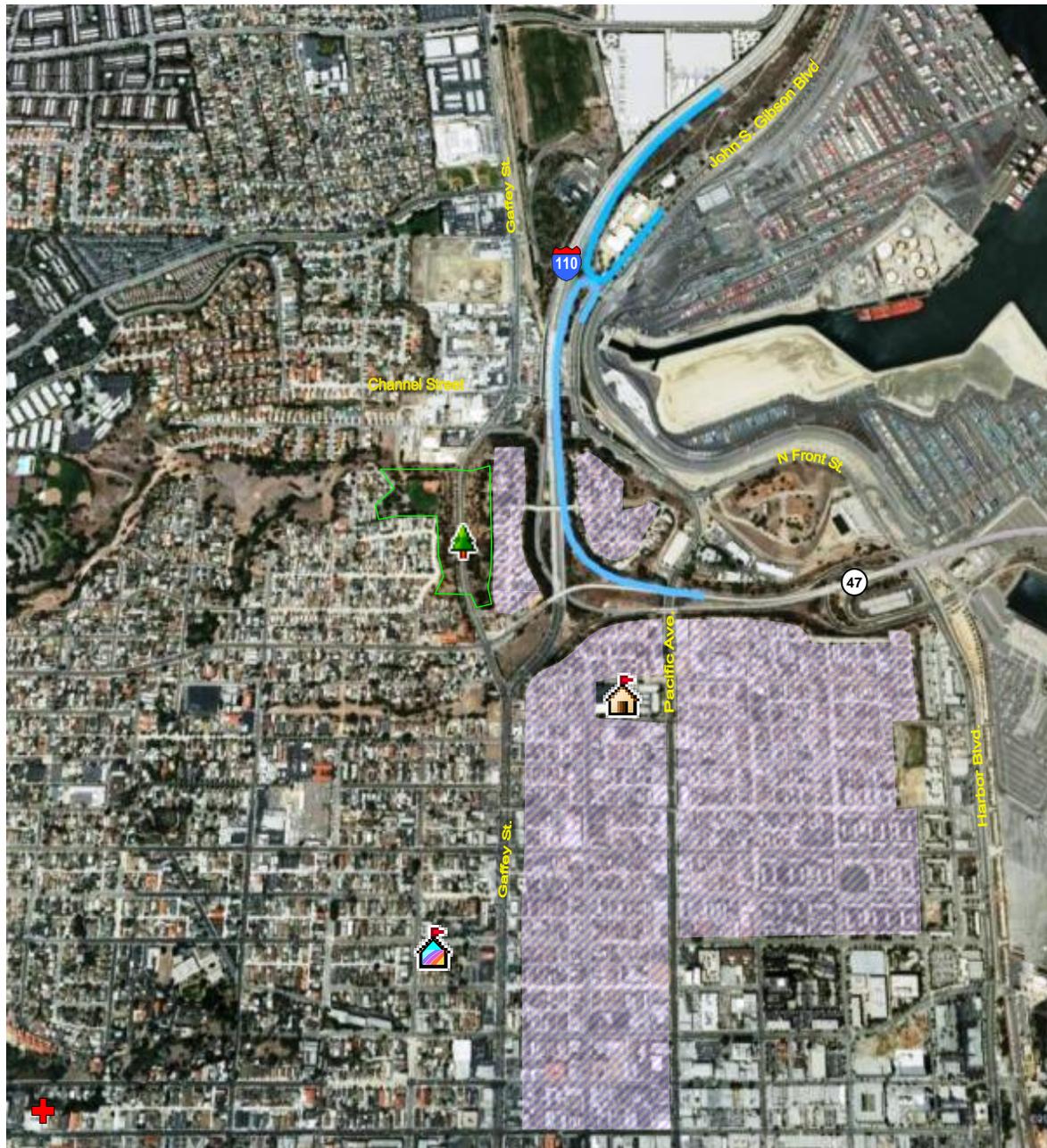
Land uses adjacent to the proposed improvements sites include Port of Los Angeles West Basin, east of the project corridor; office buildings on the west side of John S. Gibson Boulevard; and residential uses on the hillside above I-110 and SR 47. Sensitive receptors in the project vicinity are shown in Figure 2.15-2. The nearest school is Barton Hill Elementary School, located at 423 N. Pacific Avenue, approximately 800 feet (0.15-mile) south of the project corridor. Daycare facilities nearest to the project corridor include Comprehensive Child Development, located at 769 W. 3rd Street in the San Pedro Neighborhood Facility, and World Tots LA at 100 W 5th Street, located approximately 0.55-mile and 0.6-mile south of the project site, respectively. The nearest hospital is the San Pedro Peninsula Hospital (1300 W. 7th Street), located approximately 1-mile southwest of the project site.

2.15.3 Environmental Consequences

2.15.3.1 Regional Air Quality Conformity

Transportation Conformity Rule

The CAA mandates that the state submit and implement an SIP for each criteria pollutant that violates the applicable NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met. Conformity to the SIP is defined under the 1990 CAAA as conformity with the plan's purpose in eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of these standards. EPA has two types of SIP conformity guidelines: transportation conformity rules that apply to transportation plans and projects, and general conformity rules that apply to all other federal actions.



LEGEND:	 Nearest Residential Uses	 Nearest School - Barton Hill Elementary	 Nearest Daycare – Comprehensive Child Development	 Nearest Park Leland Park	 Nearest Hospital

Figure 2.15-2 Sensitive Receptor Location

The Transportation Conformity Rule, as defined in 40 CFR Parts 51 and 93, was established by EPA and the Department of Transportation (DOT) on November 30, 1993, to implement the Federal CAA conformity provisions. The CAAAs of 1990 require that transportation plans, programs, and projects that are funded by or approved under Title 23 U.S.C. or the Federal Transit Act, conform to state or federal air quality plans for achieving NAAQS. The transportation conformity process establishes the major connection between transportation planning and emission reductions from transportation sources. In addition, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (revised in 1998 as TEA-21) linked compliance with conformity requirements to continued FHWA and Federal Transit Administration (FTA) funding of transportation plans, programs, and projects. These requirements were not changed with enactment of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) on August 10, 2005. Conformity with the CAA takes place on both regional and local levels.

Regional Conformity Determination

Regional conformity was demonstrated following the Caltrans Conformity Flowchart that is included in the Caltrans Standard Environmental Reference. In determining whether a project conforms to an approved air quality plan, agencies must use current emission estimates based on the most recent population, employment, travel, and congestion estimates determined by SCAG. As the MPO for the region, SCAG is required to develop and maintain long-range plans and programs, such as 20-year RTPs and 4-year (or longer) RTIPs that set out transportation policies and programs for the region. A conforming RTIP model outcome projects that the regulated pollutants will be reduced to acceptable levels within time frames that meet the NAAQS.

The 2008 RTP was adopted by SCAG on May 8, 2008, and FHWA and FTA adopted the air quality conformity finding on June 5, 2008. The 2008 RTIP was federally approved on November 17, 2008. On December 4, 2008, SCAG adopted Amendment #1 to the 2008 RTP and Amendment #08-01 to the Final 2008 RTIP. The Amendments were federally approved on January 14, 2009. On December 3, 2009, SCAG adopted Amendment #2 to the 2008 RTP and Amendment #08-24 to the Final 2008 RTIP. The Amendments were federally approved on January 22, 2010. Most of the projects in these Amendments include minor changes, such as changes to completion years, as well as minor modifications to project scopes, costs, and funding.

The originally proposed project was referenced in the 2008 RTP and also in the *Final Adopted 2008 RTIP – Including Amendments 1-32 and 38* on page 85, in the “Los Angeles County – Local Highway Listing” with the following reference:

–HD: LA0D390 – Description: The project improves the intersection and I-110 on/off-Ramps at John S. Gibson; and enhances the operation and safety of the I-110/SR 47/Harbor Blvd. Interchange connector (SAFETEA-LU HPP # 2885). Addition of left- and right-turn lanes. Length of project – 1 mi.”

The scope of the project has been slightly modified, and the revised description, which is consistent with the current project scope, cost and schedule, is included in 2008 RTP Amendment #3 and RTIP Amendment #08-34 (adopted by SCAG on April 1, 2010 and approved by FHWA on May 6, 2010), with the following description:

–HD: LA0D390 – Description: Improve I-110 northbound at the John S. Gibson Blvd. (JSG) northbound ramps and the SR 47/I-110 connector consisting of: widening the SB SR-47 to NB I-110 connector (from SR-47 Post Mile 0.72, Station 535+00 to NB I-110 north of the JSG off-ramp); widening the northbound I-110 on-ramp at JSG; and improving the intersection of JSG Blvd. and the Fwy. ramps with improved turning radii and restriping.”

The design concept and scope of the proposed project is consistent with the revised project description; therefore, the project is considered to meet CAA requirements and is in conformity with the SIP.

2.15.3.2 Project-Level Conformity

National Ambient Air Quality Standards

Basic elements of the federal CAA include NAAQS for criteria air pollutants, hazardous air pollutants (HAPs) emission standards, state attainment plans, motor vehicle emissions standards, stationary source emission standards and permits, acid rain control measures, stratospheric O₃ protection, and enforcement provisions.

The NAAQS have two tiers: primary standards to protect public health and secondary standards to prevent environmental degradation (e.g., damage to vegetation and property, visibility impairment). The CAA mandates that the state submit and implement a SIP for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met.

As of 1990, the CAA identifies specific emission-reduction goals for areas not meeting the NAAQS. These amendments require a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA that are most applicable to the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and it sets deadlines for all areas to reach attainment for the following criteria pollutants: O₃, NO₂, SO₂, particulates less than 10 microns in diameter (PM₁₀), CO, and Pb. The NAAQS were amended in July 1997 to include the 8-hour O₃ standard and an NAAQS for fine particulates less than 2.5 microns in diameter (PM_{2.5}).

Title II contains many provisions with regard to mobile sources, including motor vehicle emission standards (e.g., new tailpipe emissions standards for cars and trucks and NO_x standards for heavy-duty vehicles), fuel standards (e.g., requirements for reformulated gasoline), and a program for cleaner fleet vehicles.

EPA reviews the most up-to-date scientific information and the existing ambient standard for each pollutant every 5 years and obtains advice from the Clean Air Scientific Advisory Committee on each review. Based on these, EPA applies consideration to revise NAAQS accordingly. The NAAQS for particulate matter were amended in September 2006 to strengthen the 24-hour PM_{2.5} standard from 65 micrograms per cubic meter (µg/m³) to 35 µg/m³. The area designation for the new standard became effective in October 2009. EPA revised the O₃ standard in 1997, setting the 8-hour standard at 0.08 parts per million (ppm). On March 12, 2008, EPA strengthened the 8-hour O₃ NAAQS based on new scientific evidence about the effects of ground-level O₃ on public health and the environment. The new standard (primary and secondary) is 0.075 ppm. Furthermore, based on new scientific studies and several health risk assessment results, EPA revised the lead (Pb) NAAQS to provide increased protection for children and other at-risk populations against adverse health effects, most notably including neurological effects in children. The revised standard level is 0.15 µg/m³ over a period of 3 months. The final rule was signed on October 15, 2008. The area designation/classification based on the new standard became effective in March 2010, and attainment demonstration SIPs will be due by 2013.

The standards for all criteria pollutants are presented in Table 2.15-2; health effects that result from exposure to these pollutants are shown in Table 2.15-3. Nonattainment designations are categorized by EPA into seven levels of severity: basic, marginal, moderate, serious, severe-15, severe-17, and extreme. The SCAB is currently classified as a nonattainment area for O₃ and fine particulates (PM₁₀ and PM_{2.5}). Based on 1990 CAAAs, the SCAB nonattainment designations are as follows: nonattainment for PM_{2.5}, requiring attainment by 2014; and “extreme” for 8-hour O₃, requiring attainment with the 0.08 ppm standard by 2024 (the former 1-hour O₃ standard was revoked by EPA on June 15, 2005; thus, it is no longer in effect for California). The SCAB was in “serious nonattainment” status for PM₁₀ until 2006. The Basin met the PM₁₀ standards at all stations except for western Riverside, where the annual PM₁₀ standard was not met as of 2006.

The annual standard was revoked by EPA in December 2006 due to a lack of evidence linking health problems to long-term exposure to coarse particulate pollution. The 24-hour PM₁₀ standard is retained at its existing value. Currently, the Basin meets the 24-hour average federal standard, and the only days that exceed the standard are associated with high wind natural events or exceptional events, such as wildfires.

For CO, attainment demonstrations were previously submitted to EPA in 1992, 1994, and 1997 to bring the SCAB into attainment with the federal standard in 2000. In 2001, the CO standard was exceeded in the SCAB on 3 days, thus leaving the basin in nonattainment status. At that time, a request to EPA for an extension of the attainment date to 2002 was planned to be included in the revision to the 1997 Air Quality Management Plan (AQMP). Due to delays, the CO attainment demonstration provided in the 1997 AQMP amendments lapsed. In January 2005, the California Air Resources Board (CARB) declared CO attainment for the SCAB based on air quality data collected during 2001 through 2003. The redesignation was approved by the State Office of Administrative Law, and it became effective on July 23, 2004. The 2005 CO Redesignation Request and Maintenance Plan for SCAB was reviewed and approved by EPA, and the federal CO attainment status for SCAB became effective on June 11, 2007.

All nonattainment areas are subject to a “transportation conformity” measure, requiring local transportation and air quality officials to coordinate their planning to ensure that transportation projects do not hinder an area’s ability to reach its clean air goals. These requirements become effective 1-year after an area’s nonattainment designation.

California Ambient Air Quality Standards

The State of California began to set its ambient air quality standards, CAAQS, in 1969 under the mandate of the Mulford-Carrell Act. The CCAA was enacted September 30, 1988, and it became effective January 1, 1989. The CCAA requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. As shown in Table 2.15-1, the CAAQS are more stringent than the NAAQS for most of the criteria air pollutants. In general, California standards are more health protective than the corresponding NAAQS. In addition, the CAAQS include standards for other pollutants recognized by the state. For example, California has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Moreover, on April 28, 2005, CARB approved a new 8-hour-average O₃ standard of 0.070 ppm to further protect California’s most vulnerable population (i.e., children) from the adverse health effects associated with ground-level O₃. The standard went into effect in early 2006.

**Table 2.15-2
Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ^a	Federal Standards ^{b,c}	
		Concentration ^c	Primary ^c	Secondary ^c
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	—	Same as Primary
	8 Hour	0.07 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³) ^d	
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	AAM	20 µg/m ³	—	
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard	35 µg/m ³	Same as Primary
	AAM	12 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	None
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	
Nitrogen Dioxide (NO ₂)	AAM	0.030 ppm (57 µg/m ³)	.053 ppm (100 µg/m ³) ^e	Same as Primary
	1 Hour	0.18 ppm (339 µg/m ³)	.100 ppm (188 µg/m ³) ^e	None
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 µg/m ³)	—	—
	3 Hour	—	—	0.5 ppm (1300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³) ^f	—
Lead (Pb) ^g	30-Day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³	Same as Primary
	3-month rolling ^h	—	0.15 µg/m ³	Same as Primary
Visibility-Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70%.	No Federal Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride ^g	24 Hour	0.01 ppm (26 µg/m ³)		

^a California standards for O₃, CO (except Lake Tahoe), SO₂ (1 and 24 hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

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

^d The new standard of 0.075 ppm (previously 0.08 ppm) was adopted on March 12, 2008, and it became effective in June, 2008.

^e To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

^f On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO₂ standard of 0.14 ppm and the annual primary SO₂ standard of 0.030 ppm, effective August 23, 2010. The secondary SO₂ standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA.

^g The California Air Resources Board (CARB) has identified Pb and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^h Final rule for the new federal standard was signed October 15, 2008.

AAM – annual arithmetic mean; mg/m³ – milligrams per cubic meter; µg/m³ – micrograms per cubic meter; ppm – parts per million

Source: California Air Resources Board Web site: <http://www.arb.ca.gov/aqs/> Revised September 8, 2010.

**Table 2.15-3
Health Effects Summary for Criteria Air Pollutants**

Pollutant	Sources	Primary Effects
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight.	Aggravation of respiratory diseases; irritation of eyes; impairment of pulmonary function; plant leaf injury.
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust; high temperature; stationary combustion; atmospheric reactions.	Aggravation of respiratory illness; reduced visibility; reduced plant growth; formation of acid rain.
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; and natural events, such as decomposition of organic matter.	Reduced tolerance for exercise; impairment of mental function; impairment of fetal development; impairment of learning ability; death at high levels of exposure; aggravation of some cardiovascular diseases (angina).
Particulate Matter (PM ₁₀ and PM _{2.5})	Fuel combustion in motor vehicles, equipment, and industrial sources; construction activities; industrial processes; residential and agricultural burning; atmospheric chemical reactions.	Reduced lung function; aggravation of the effects of gaseous pollutants; aggravation of respiratory and cardio-respiratory diseases; increased cough and chest discomfort; soiling; reduced visibility.
Sulfur Dioxide (SO ₂)	Combustion of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ores; industrial processes.	Aggravation of respiratory and cardiovascular diseases; reduced lung function; carcinogenesis; irritation of eyes; reduced visibility; plant injury; deterioration of materials (e.g., textiles, leather, finishes, coating).
Lead (Pb)	Contaminated soil.	Impairment of blood function and nerve construction; behavioral and hearing problems in children.

Source: EPA Web site at www.epa.gov/air/oaqps/greenbk/. Accessed November 2006.

Based on the CAAQS, the SCAB complies with the state standards for sulfates, hydrogen sulfide, and vinyl chloride, but it is unclassified for the California standard for visibility-reducing particles. Table 2.15-4 provides the Basin's attainment status with respect to federal and state standards.

Project-Level Conformity Determination

Project-level conformity is required for projects in CO, PM₁₀, and PM_{2.5} nonattainment and maintenance areas. As discussed previously, a region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant CAAQS or NAAQS. In general, projects must not cause the standards to be violated, and in nonattainment areas, the project must not cause any increase in the number and severity of violations.

Project-level transportation conformity was determined by conducting hot-spot analysis for CO, PM₁₀, and PM_{2.5}, for which the SCAB is designated as nonattainment or maintenance area. The hot-spot analyses were based on the Caltrans guidance document, *Transportation Project-Level Carbon Monoxide Protocol (CO Protocol)*, and the FHWA/EPA guidance document, *Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas (Guidelines)*.

**Table 2.15-4
South Coast Air Basin Attainment Status**

Pollutant	Attainment Status Basis	
	National Standard	California Standard
Ozone (O ₃), 1-hour average	N/A ^a	Extreme
Ozone (O ₃), 8-hour average	Extreme ^b	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance ^c	Attainment ^c
Nitrogen Dioxide (NO ₂)	Attainment/Maintenance	Nonattainment ^d
Sulfur Dioxide (SO ₂)	Attainment	Attainment
PM ₁₀	Serious	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Lead (Pb)	Attainment ^e	Nonattainment
Sulfates (SO ₄ ²⁻)	N/A	Attainment

N/A – not applicable
^a The National 1-hour O₃ standard was revoked June 15, 2005.
^b The ~~extreme~~ nonattainment status was in effect on June 4, 2010.
^c The SCAB was redesignated by EPA as attainment for CO, effective June 11, 2007.
^d The State NO₂ standard was amended February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. The Office of Administrative Law approved the proposed amendments and the new standards became effective on March 20, 2008.
^e In August 2009, CARB submitted a recommendation for nonattainment status for Los Angeles County portion in SCAB based on the new federal lead standard (0.15 µg/m³ rolling 3-month concentration).

Sources: EPA, 2007; CARB, 2009a; and SCAQMD, 2007.

In March 2006, the Transportation Conformity Rule was updated to include regulations for performing qualitative analysis of PM₁₀ and PM_{2.5} hot-spot impacts. Only projects that are considered ~~Projects of Air Quality Concern~~ "Projects of Air Quality Concern" (POAQC) are required to perform an analysis. POAQCs are defined generally as: (1) new or expanded highway projects that have a significant number of or significant increase in diesel vehicles, (2) projects affecting intersections that are LOS D, E, or F with a significant number of diesel vehicles, (3) new or expanded bus and rail terminals and transfer points with a significant number of diesel vehicles congregating in a single location, and (4) projects in or affecting locations, areas, or categories of sites that are identified in the PM₁₀ or PM_{2.5} applicable implementation plan as sites of possible violation.

Pursuant to Federal Conformity Regulations [specifically, 40 CFR 93.105(c)(1)(i)], an Interagency Review Form was prepared for the proposed project and was submitted to the SCAG Transportation Conformity Working Group (TCWG). The TCWG discussed the project Review Form at their meeting on January 26, 2010, and concurred with the proposed conclusion that the project is not a POAQC (see relevant documentation in Appendix C).

The proposed project is not considered a POAQC because it does not meet the definition of a POAQC as defined in the EPA Transportation Conformity Guidance.

- i. The project is not a new or expanded highway project. The proposed project includes components for improvement of safety and traffic flow along the project corridor. The project proposes improving the intersection and I-110 on-/off-ramps at John S. Gibson Boulevard; and enhancing the operation and safety of the I-110/SR 47/Harbor Boulevard interchange connector. The intersection of John S. Gibson Boulevard and the northbound I-110 ramps would be restriped to provide longer left-turn lanes. The signal system would be upgraded. Proposed improvements do not include a capacity-increasing component and would not cause any change in fleet mix or traffic pattern. This type of project improves roadway operations by reducing traffic congestion and reducing delay time per vehicle. Based on the Traffic Study (Iteris, 2009), the daily traffic volumes along the connector ramps and freeway segments within the project limits would be well below the 125,000 average daily traffic (ADT), and the heavy truck daily traffic would also remain below the 10,000 ADT threshold for a POAQC through the RTP horizon year. Similarly, based on the project traffic study, the truck percentages would not change during the years after completion of construction through the RTP horizon year of 2035.
- ii. The proposed project would not affect congested intersections with a significant number of diesel trucks. The LOS for the intersection affected by the project would not change, but the volume to capacity ratio (v/c) would slightly improve compared to the no build scenario.
- iii. The project does not include highway facility improvements to provide a new connection from highway to a major freight, bus, or intermodal terminal.
- iv. The project would not involve an increase in the number of diesel transit buses or diesel trucks.
- v. The project site is not identified in the SIP as a site of possible violation for PM_{10} or $PM_{2.5}$.

Based on the above discussion, it can be concluded that the proposed project meets the CAA requirements and 40 CFR 93.116 without a qualitative hot-spot analysis pursuant to FHWA and EPA *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*. The proposed project would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation, and it would comply with any local, state, and federal rules and regulations developed as a result of implementing control or mitigation measures and/or strategies in the 2003 PM_{10} SIP and 2007 $PM_{2.5}$ SIP (approved by EPA in May 2008). Therefore, PM hot-spot analysis is not required for hot-spot analyses.

Furthermore, construction of the proposed project improvements would last approximately 2.5 years and would comply with SCAQMD Rule 403; therefore, temporary construction emissions are not required to be considered.

CO Hot-Spot Analysis

The CO Protocol has a screening exercise that would determine whether the project requires a qualitative or quantitative analysis, or none would be necessary. Below are the steps taken following Figure 1 of the CO Protocol:

3.1.1 Is the project exempt from all emissions analyses?

No – The project category is not listed in Table 1 of the CO Protocol (derived from 40 CFR Part 93, Table 2) and thus, the proposed project is not exempt from all emission analyses; *continue to step 3.1.2.*

3.1.2 Is project exempt from regional emissions analyses?

No – The proposed project includes components that are not among the projects listed in Table 2 of the Protocol; *continue to step 3.1.3.*

3.1.3 Is project defined as regionally significant?

Yes – The project is defined as nonexempt and has been modeled in the regional emissions analysis of the currently conforming RTP and RTIP; *continue to step 3.1.4.*

3.1.4. Is project in a federal attainment area?

No – The project is in the SCAB, which is currently designated nonattainment for O₃, PM₁₀, and PM_{2.5} NAAQS; *continue to step 3.1.5.*

3.1.5 Is there a currently conforming RTP and TIP?

Yes – The SCAG 2008 RTP and 2008 RTIP are the currently conforming plans for the project area; *continue to step 3.1.6.*

3.1.6 Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?

Yes – The project is included in both documents; *continue to step 3.1.7.*

3.1.7 Has the project design concept and/or scope changed significantly from that in regional analysis?

No – *continue to step 3.1.9*

3.1.9 Examine local impacts – Proceed to Section 4

Section 4, local analysis: procedures delineated in the flow chart of Figure 3 of the CO Protocol were followed as described below.

Level 1. Is the project in a CO nonattainment area?

No – The project is located in the SCAB, which was approved and redesignated by EPA as a CO attainment/maintenance area as of June 11, 2007. *Proceed to Level 1a.*

Level 1a. Was the area designation as “attainment” after the 1990 Clean Air Act?

Yes – See response to previous question. *Proceed to Level 1b.*

Level 1b. Has “continuous attainment” been verified with the local Air District, if appropriate?

Yes – As shown in Table 2.15-1, the air quality monitoring data show no exceedance, and continued attainment has been verified by the District. *Proceed to Level 7.*

Level 7. Does project worsen air quality?

No – Based on the following discussion, as prescribed by the Protocol, the project is likely to be beneficial to air quality at the intersections and along the local project area.

Screening Analysis (Reference Section 4.7.1 of CO Protocol)

- a. Does the project significantly increase (more than 2%) the percentage of vehicles operating in cold start mode?

An increase in percentage of vehicles in cold start is not anticipated because the project does not include areas such as parking lots, where engine cold starts are expected to occur.

- b. Does the project significantly increase traffic volumes? According to the Protocol, increases in traffic volume in excess of 5% are generally considered potentially significant. Increases less than 5% would be potentially significant, if a reduction in average speeds is anticipated.

The proposed project is intended to improve traffic safety and flow, and reduce congestion. Based on the traffic study, the project would not result in a change in traffic volume or vehicle mix along the freeway segments and connector ramps. Table 2.15-5 includes average daily volumes along the project corridor for the existing year, and for opening year 2014 with and without the project. Table 2.15-6 presents average daily volumes along the project corridor for horizon year 2035 with and without the project. As shown, the proposed project would not change traffic volumes, and it would not affect the fleet mix or traffic patterns along the project corridor; however, the project would improve traffic flow because

average speeds along the connector ramps would increase for the Build Alternative compared to the no-build scenario.

**Table 2.15-5
Average Daily Traffic Volumes and Peak-Hour Speed Along Project Corridor for Existing and Opening Year (No Build and Build)**

Roadway Segment	Existing – Year 2009				Opening Year – 2014				
	Traffic Volume (ADT)		% Heavy Trucks	Peak-Hour Speed (mph) AM/ PM	No Build and Build			Peak-Hour Speed (mph) AM/ PM	
	All Vehicles	Heavy Trucks			ADT		% Heavy Trucks	No Build	Build
			All Vehicles	Heavy Trucks					
SB SR 47 East of Harbor Boulevard On-Ramp	17,111	2,661	16	55/ 55	19,937	4,035	20	55/ 55	55/ 55
SB SR 47 Weaving from Harbor Boulevard On-Ramp to I-110 Connector	22,902	3,077	13	40/ 39	25,876	4,518	17	32/ 38	34/ 39
SB SR 47 to NB I-110 Connector	10,298	1,887	18	40/ 39	13,372	3,302	25	32/ 38	34/ 39
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Blvd Off-Ramp	29,564	2,327	8	50/ 49	33,069	3,774	11	41/ 47	45/ 50
NB I-110 Off-Ramp to John S. Gibson Boulevard	605	215	36	50/ 49	1,403	244	17	41/ 47	45/ 50
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	28,959	2,112	7	65/ 65	31,666	3,530	11	65/ 65	65/ 65
John S. Gibson Boulevard On-Ramp to NB I-110 (merge)	13,758	1,090	8	40/ 40	17,378	2,450	14	40/ 40	40/ 40
NB I-110 North of John S. Gibson Boulevard On-Ramp	42,717	3,201	7	65/ 65	49,043	5,980	12	65/ 65	65/ 65
Note: Improvements to no-build condition are shown in bold .									

Source: Iteris, 2009; Parsons, 2009.

**Table 2.15-6
Average Daily Traffic Volumes and Peak-Hour Speed along Project Corridor for
Horizon Year 2035 (No Build and Build)**

Roadway Segment	Horizon Year – 2035				
	No Build and Build			Peak-Hour Speed (mph)	
	ADT		% Heavy Trucks	AM/ PM	
	All Vehicles	Heavy Trucks		No Build	Build
SB SR 47 East of Harbor Boulevard On-Ramp	22,712	4,543	20	55/ 55	55/ 55
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	36,983	5,003	14	38/ 35	41/ 38
SB SR 47 to NB I-110 Connector	22,929	3,790	17	38/ 35	41/ 38
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	43,775	4,309	10	40/ 40	44/ 43
NB I-110 Off-Ramp to John S. Gibson Boulevard	1,961	285	15	40/ 40	44/ 43
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	41,814	4,025	10	65/ 65	65/ 65
John S. Gibson Boulevard On-Ramp to NB I-110 (merge)	19,764	3,350	17	35/ 35	36/ 36
NB I-110 North of John S. Gibson Boulevard On-Ramp	61,578	7,375	12	65/ 65	65/ 65
Note: Improvements to no-build condition are shown in bold .					

Source: Iteris, 2009; Parsons, 2009.

- c. Does the project worsen 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 intersections, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.

The average daily speed on segments of the project corridor are either similar (i.e., highway segments) or higher (i.e., ramps and connectors) for the Build Alternative compared with the no-build condition; therefore, the project generally improves traffic flow. Furthermore, as summarized in Tables 2.15-5 and 2.15-6, other indicators of traffic conditions, such as LOS and density along the roadway segments and at the project intersection (i.e., John S. Gibson Boulevard and I-110 NB off-ramp/Yang Ming Driveway), would improve with project implementation.

Based on the above screening analysis, it is concluded that the project is satisfactory for the screening-level analysis, and no further qualitative or quantitative CO analysis is required.

Particulate Matter (PM₁₀ and PM_{2.5}) Qualitative Hot-Spot Analysis

As discussed earlier, the TCWG determined that the project is not a POAQC; therefore, no further PM hot-spot analysis is required for the proposed project.

2.15.3.3 Construction Impacts

Quantification of construction impact analysis is not required by Caltrans and FHWA, pursuant to NEPA, for projects having a construction schedule not longer than 5 years. The proposed project has an estimated construction schedule of approximately 2.5 years and does not require a quantitative analysis under that criterion. However, the Los Angeles Harbor Department (LAHD), as the local agency sponsor as well as a responsible agency for the proposed project, requires such an analysis for all of its projects; therefore, a quantitative construction impacts analysis is performed pursuant to LAHD CEQA requirements. The analysis is presented as an Attachment A-1 in Appendix A of this IS/EA.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) 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 particulate matter (PM₁₀ and PM_{2.5}), and TACs such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway 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 PM₁₀, PM_{2.5}, and small amounts of CO, SO₂, NO_x, and VOCs. 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 it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by EPA 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 would be reduced by up to 50 percent. Caltrans' Standard

Specifications (Section 10) pertaining to dust minimization requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

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

SO₂ 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 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 SO₂-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as the distance from the site(s) increases.

The construction contractor will be required to comply with and adhere to all applicable rules and regulations, such as SCAQMD Rule 403 for fugitive dust control, Rule 1113 for control of VOC emissions from asphalt operations, and other pertinent requirements concerning the operation of construction equipment and dust control. Table 2.15-7 summarizes the applicable measures required by Rule 403. Implementation of these control measures would reduce the fugitive dust emissions by approximately 50 percent.

**Table 2.15-7
Rule 403 – Best Available Control Measures for All Construction Sources**

Source Category	Control Measure
Backfilling	01-1 Stabilize backfill material when not actively handling.
	01-2 Stabilize backfill material during handling.
	01-3 Stabilize soil at completion of actively.
Clearing and grubbing	02-1 Maintain stability of soil through prewatering of site prior to clearing and grubbing.
	02-2 Stabilize soil during clearing and grubbing activities.
	02-3 Stabilize soil immediately after clearing and grubbing activities.
Clearing forms	03-1 Use water spray to clear forms; or
	03-2 Use sweeping and water spray to clear forms; or
	03-3 Use vacuum system to clear forms.
Crushing	04-1 Stabilize surface soils prior to operation of support equipment.
	04-2 Stabilize material after crushing.

**Table 2.15-7
Rule 403 – Best Available Control Measures for All Construction Sources**

Source Category	Control Measure
Cut and fill	05-1 Prewater soils prior to cut and fill activities.
	05-2 Stabilize soil during and after cut and fill activities.
Demolition – mechanical/manual	06-1 Stabilize wind-erodible surfaces to reduce dust.
	06-2 Stabilize surface soil where support equipment and vehicles will operate.
	06-3 Stabilize loose soil and demolition debris.
	06-4 Comply with SCAQMD Rule 1403.
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site
	07-2 Stabilize disturbed soil between structures.
Earth-moving activities	08-1 Preapply water to depth of proposed cuts.
	08-2 Reapply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction.
	08-3 Stabilize soils once earth-moving activities are complete.
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions.
	09-2 Maintain at least 6 inches of freeboard on haul vehicles.
	09-3 Stabilize material while transporting to reduce fugitive dust emissions.
	09-4 Stabilize material while unloading to reduce fugitive dust emissions.
	09-5 Comply with Vehicle Code Section 23114.
Landscaping	10-1 Stabilize soils, materials, and slopes.
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing.
	11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.
Screening	12-1 Prewater material prior to screening.
	12-2 Limit fugitive dust emissions to opacity and plume length standards
	12-3 Stabilize material immediately after screening.
Staging areas	13-1 Stabilize staging areas during use.
	13-2 Stabilize staging area soils at project completion.
Stockpiles/bulk material handling	14-1 Stabilize stockpiled materials.
	14-2 Stockpiles within 100 yards of offsite occupied buildings must not be greater than 8 feet in height, or they must have a road bladed to the top to allow water truck access, or they must have an operational water irrigation system that is capable of complete stockpile coverage.
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas.
	15-2 Stabilize all haul routes.
	15-3 Direct construction traffic over established haul routes.
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate.
	16-2 Stabilize soils at the completion of trenching activities.
Truck loading	17-1 Prewater material prior to loading.
	17-2 Ensure that freeboard exceeds 6 inches (California Vehicle Code [CVC] 23114).
Turf over-seeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards.
	18-2 Cover haul vehicles prior to exiting the site.

Table 2.15-7
Rule 403 – Best Available Control Measures for All Construction Sources

Source Category	Control Measure
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards.
	19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.
Vacant land	20-1 In instances where vacant lots are 0.10-acre or larger and have a cumulative area of 500 ft ² or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective control measures.

Source: SCAQMD, 2005, Rule 403- Table 1.

Furthermore, the LAHD has developed *Sustainable Construction Guidelines* for reducing air emissions from all LAHD-sponsored construction projects. The Guidelines include the use of Best Management Practices (BMPs) to reduce or eliminate environmental impacts from construction activities.

With implementation of the LAHD Sustainable Construction Guidelines for Reducing Air Emissions during project construction phase, impacts from air pollutant emissions during project construction would not be substantial.

2.15.3.4 Toxic Air Contaminants

The greatest potential for Toxic Air Contaminants (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. “Individual Cancer Risk” is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the construction schedule of 27 months, and considering that most grading and excavation activities would occur intermittently during different construction phases, the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions, with no residual emissions after construction and corresponding individual cancer risk.

2.15.3.5 Asbestos

Based on the ISA study for this project, no indicator of ACMs was observed; therefore, project construction activities would not have a potential for release of ACMs.

2.15.3.6 Odors

During project construction, potential sources of objectionable odors would be related to the operation of diesel-powered equipment and to off-gas emissions during road-building activities, such as paving and asphaltting. Such odors, however, would be short-term and limited to the area where the specific activity is occurring. The perception of these odors is dependent upon climatic conditions such as temperature, humidity, wind speed, and wind direction. Furthermore, SCAQMD Rule 1113 (Architectural Coatings) limits the amount of volatile organic compounds (VOCs) from paving, asphalt, concrete curing, and cement coatings operations. Construction of the proposed project would be performed in compliance with SCAQMD Rules, which limit VOC emissions. In addition, construction activities would be located within fenced, secured sites as far from receptors as feasible, with no public access. Due to the relatively short-term nature of construction odors, controlled access, and the distance to the nearest receptors, odors are not likely to affect a substantial number of people.

2.15.3.7 Mobile Source Air Toxics

Controlling air toxic emissions became a national priority with the passage of the CAAA, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants (HAPs). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics. MSATs are compounds emitted from roadway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Airborne toxic metals can also result from engine wear or from impurities in oil or gasoline (see document No. EPA420-R-00-023, December 2000). EPA has assessed the expansive list of HAPs in their latest rule on the *Control of Hazardous Air Pollutants from Mobile Sources* (*Federal Register*, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their *Integrated Risk Information System* (IRIS) (<http://www.epa.gov/ncea/iris/index.html>). In addition, EPA identified six compounds with significant contributions from mobile sources (FHWA, 2006) that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (<http://www.epa.gov/ttn/atw/nata1999/>). The list of priority MSATs was revised in the 2009 Update Memorandum (FHWA, 2009), which added one more compound to the previous list. The priority MSATs are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (DPM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules. Of these pollutants, DPM, 1,3-butadiene, and benzene account for approximately 89 percent of the total toxic air pollutants for potential excess cancer risk. DPM accounts for 71.2 percent of the total toxic air pollutants for potential excess cancer risk.

FHWA released an interim guidance on February 3, 2006, determining when and how to address MSAT impacts in the NEPA process for transportation projects. The guidance document was updated on September 30, 2009 (FHWA, 2009). FHWA has 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.

For projects warranting MSAT analysis, the seven priority MSATs should be analyzed.

Under Category 1, three types of projects are included: (a) projects qualifying as a categorical exclusion under 23 CFR 771.117(c); (b) projects exempt under the CAA conformity rule under 40 CFR 93.126; and (c) other projects with no meaningful impacts on traffic volumes or vehicle mix.

The types of projects included in Category 2 are those that serve to improve operations of highway, transit, or freight movement without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions. This category covers a broad range of projects. Any projects not meeting the threshold criteria for higher potential effects set forth in Category 3 below and not meeting the criteria in Category 1 should be included in this category. Examples of these types of projects are minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street or where design year traffic is not projected to meet the 140,000 to 150,000 AADT criterion.

Category 3 includes projects that have the potential for meaningful differences among project alternatives. Only a limited number of projects meet this two-pronged test. To fall into this category, projects must:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of DPM 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 AADT is projected to be in the range of 140,000 to 150,000, or greater, by the design year; and
- Projects 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, hospitals).

As discussed above, several studies have concluded that mobile sources (i.e., on-road and non-road combined) are responsible for most of the excess cancer risk associated with exposure to urban air toxics. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. Currently, the tools and techniques for assessing project-specific

health impacts from MSATs are limited. Furthermore, neither EPA nor CARB have established regulatory concentration targets for the six relevant MSAT pollutants appropriate for use in the project development process. For the same reason, states are neither required to achieve an identified level of air toxics in the ambient air nor identify air toxics reduction measures in the SIP. Developing strategies for reduction of MSATs is a cooperative effort between federal and local authorized agencies. The CAA provides EPA with the authority to establish and regulate emission standards for engines and vehicles. The State of California also has certain rights to adopt its own emission regulations, which are often more stringent than the federal rules. To reduce mobile source emissions, mandatory and incentive-based programs are developed in conjunction with new engine emission regulations; additional emission testing requirements (i.e., supplemental emission test [SET], not-to-exceed [NTE] limits); and limiting fuel sulfur content. These programs are implemented by all levels of government: federal, state, and local. Currently, FHWA's interim guidance update is used for analysis of potential impacts of MSATs to be included in environmental documents.

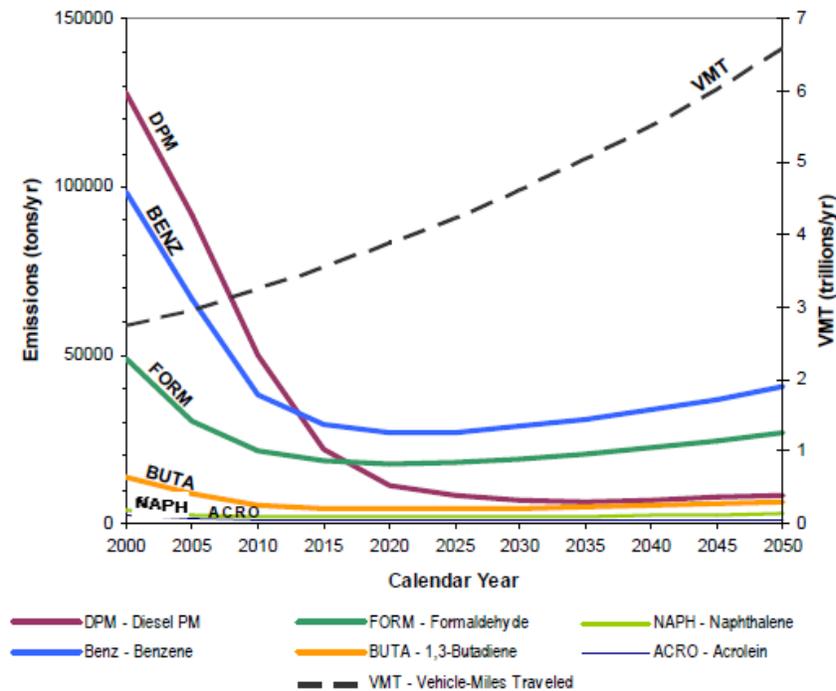
The 2007 EPA rule requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (vehicle-miles traveled [VMT]) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050, as shown in Figure 2.15-3.

Based on the Traffic Analysis Report (Iteris, 2009), the proposed project is not anticipated to significantly affect traffic patterns or fleet mix in the project area (see Section 2.7). Therefore, based on FHWA's tiered approach, which is recommended by the Agency's interim guidance document, it would be considered to have minimal potential MSAT effects (Category 2); therefore, a qualitative analysis is provided for project MSAT impacts.

Incomplete or Unavailable Information for Project-Specific MSAT Health Impact Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

**Figure 2.15-3
National MSAT Emissions Trend, 1999 - 2050
for Vehicles Operating on Roadways**



Notes:

- (1) The projected data were estimated using EPA’s MOBILE6.2 Model run 20 August 2009.
- (2) Annual emissions of polycyclic organic mater are projected to be 561 tons per year for 1999, decreasing to 373 tons per year for 2050.
- (3) Trends for specific location may be different, depending on locally derived information representing vehicle miles traveled, vehicle speeds, vehicle mix, fuels, emission control programs, methodology, and other factors.

Source: FHWA, 2009.

EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the CAA and its amendments and have specific statutory obligations with respect to HAPs and MSATs. EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is “a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects” (EPA, <https://www.epa.gov/iris/>). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative

estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSATs, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI Web site, <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70-year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, because such information is unavailable. The results produced by EPA's MOBILE6.2 model, CARB's Emfac2007 model, and EPA's Draft MOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates DPM emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of EPA's guideline CAL3QHC model was conducted in a study by the National Cooperative Highway Research Program (NCHRP), available at http://www.epa.gov/scram001/dispersion_alt.htm#hyroad, which documents poor model performance at ten sites across the country – three where intensive monitoring was conducted plus an additional seven with less-intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with NAAQS for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near

roadways and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, which is a concern expressed by HEI (<http://pubs.healtheffects.org/view.php?id=282>). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds and, in particular, DPM. EPA (<http://www.epa.gov/risk/basicinformation.htm#g>) and HEI (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk assessment of DPM in ambient settings.

There is also lack of a national consensus on an acceptable level of risk. The current context is the process used by EPA as provided by the CAA to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a –safe” or –acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities, plus improved access for emergency response, that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types, a variety of studies show that some are either statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of many EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

As previously described, in southern California, SCAQMD conducted a comprehensive study on air toxics within the SCAB. The MATES-II and MATES-III Studies (SCAQMD, 2000 and 2008, respectively), which monitored more than 30 toxic air pollutants, included estimates of cancer risk from exposure to DPMs. The MATES studies identified particulate emissions, attributed mostly to diesel engines, as an important cancer risk factor. According to MATES-III, DPMs accounted for approximately 84 percent of the total cancer risk associated with the investigated group of air pollutants. The MATES studies also provided regional trends in estimated outdoor cancer risk from air toxics emissions.

SCAQMD's MATES-II and MATES-III studies offer an opportunity to estimate air toxics-related health risks from roads; however, while at the regional scale the study approximates air toxics-related health risk from roads, it was not designed to provide accurate approximations of risk as a function of proximity to roads. Monitoring data near freeways were limited to three sites, and modeling results were not finely resolved to provide concentration gradients near roads. The MATES-II monitoring results are consistent with other research studies that indicate that pollutant concentrations generally diminish as distance is increased from the source and are often the same as background conditions beyond 100 meters from a road. Furthermore, the study cautions that results are highly dependent upon the unit risk factors assumed, particularly for DPM, for which uncertainties are an order of magnitude or more. At the microscale level, MATES-II was not designed to effectively assess changes in pollutant concentrations with varying distance from roadways; therefore, the currently available methodology and techniques need to be refined so that they provide tools and information that would be useful to alleviate the uncertainties listed above and enable a more comprehensive evaluation of the health impacts specific to this project.

Analysis of MSAT Effects

The proposed project would improve traffic operations of an existing facility to provide safe traffic flow, and it would have minimal effects in MSAT emissions; therefore, a qualitative MSAT analysis is provided in this section. A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions among Transportation Project Alternatives*.²

For both the Build and No Build Alternatives, the amount of MSAT emissions associated with project operation would be proportional to the vehicle miles traveled, or VMT, assuming that other variables, such as fleet mix, are the same between the Build and No Build Alternatives.

The project traffic study projected that there would be no change in traffic volume and fleet mix for the Build Alternative compared to the No Build Alternative. Similarly, the VMT would remain unchanged; however, because of proposed improvements in traffic operations along the project corridor, the travel speed would slightly increase, as shown in Tables 2.15-8 and 2.15-9. According to CT-EMFAC and MOBILE6.2 model, emissions of all priority MSATs, except for DPM, decrease as speed increases. As such, the Build Alternative would generally reduce MSAT emissions, per VMT basis, to some extent, and the proposed project impact would be considered beneficial. Furthermore, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by 72 percent between 1999 and 2050 (see Figure 2.15-3). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures; however, the magnitude of the EPA-projected reductions is so great (even after accounting for regional VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

² www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

**Table 2.15-8
Average Daily VMT and Speed along Project Corridor for Opening Year 2014**

Intersection	2014 – No Build			2014 – Build Opening Year		
	Daily VMT		Average Speed (mph)	Daily VMT		Average Speed (mph)
	Autos	Heavy Trucks		Autos	Heavy Trucks	
SB SR 47 East of Harbor Boulevard On-Ramp	6,347	1,412	55	6,347	1,412	55
SR 47 SB Weaving – from Harbor Boulevard On-Ramp to I-110 Connector	1,432	271	35	1,432	271	37
SB SR 47 to NB I-110 Connector	5,584	1,552	35	5,584	1,552	37
I-110 NB Weaving Segment – from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	629	75	44	629	75	48
NB I-110 Off-Ramp to John S. Gibson Boulevard	279	51	44	279	51	48
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	14,167	1,659	65	14,167	1,659	65
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	5,062	760	40	5,062	760	42
NB I-110 North of John S. Gibson Boulevard On-Ramp	34,853	4,485	65	34,853	4,485	65

Source: Project Traffic Study, Iteris, 2009.

**Table 2.15-9
Average Daily VMT and Speed along Project Corridor for Horizon Year 2035**

Intersection	2035 – No Build			2035 – Build		
	Daily VMT		Average Speed (mph)	Daily VMT		Average Speed (mph)
	Autos	Heavy Trucks		Autos	Heavy Trucks	
SB SR 47 East of Harbor Boulevard On-Ramp	7,242	1,590	55	7,242	1,590	55
SR 47 SB Weaving – from Harbor Boulevard On-Ramp to I-110 Connector	2,086	300	37	2,086	300	40
SB SR 47 to NB I-110 Connector	9,975	1,781	37	9,975	1,781	40
I-110 NB Weaving Segment – from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	839	86	40	839	86	44
NB I-110 Off-Ramp to John S. Gibson Boulevard	393	60	40	393	60	44
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	18,835	1,892	65	18,835	1,892	65
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	5,676	1,039	35	5,676	1,039	36
NB I-110 North of John S. Gibson Boulevard On-Ramp	43,787	5,531	65	43,787	5,531	65

Source: Project Traffic Study, Iteris, 2009.

2.15.4 Climate Change

Climate change is analyzed in Section 2.18 under “Climate Change (CEQA).” Neither EPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas (GHG) analysis. As stated on FHWA’s climate change Web site (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process – from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision making and improve efficiency at the program level, and it will inform the analysis and stewardship needs of project-level decision making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in the CEQA chapter of this environmental document and may be used to inform the NEPA decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours traveled.

2.15.5 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

Because no changes to existing air quality conditions would be expected under the No Build Alternative, no avoidance, minimization, or mitigation measures would be required.

Build Alternative

Construction

The construction contractor will be required to comply with and adhere to all applicable rules and regulations, such as SCAQMD Rule 403 for fugitive dust control, Rule 1113 for control of VOC emissions from asphalt operations, and other pertinent requirements concerning the operation of construction equipment and dust control. Implementation of these control measures would reduce the fugitive dust emissions by approximately 50 percent. In addition, the construction contractor will also be required to follow the *Sustainable Construction Guidelines* for reducing air emissions from all LAHD-sponsored construction projects, as presented in Attachment B of Appendix A of this IS/EA.

MM AQ-1 As required by the LAHD, the construction contractor shall adhere to the current LAHD Sustainable Construction Guidelines for Reducing Air Emissions during project construction phase. The LAHD shall determine the applicable BMP's once the contractor identifies and secures a final equipment list and project scope.

Permanent

As stated in Section 2.15.3.1, the proposed project is referenced in the 2008 RTIP. The design concept and scope of the proposed project is consistent with the project description in the RTIP document and the assumptions in SCAG's regional analysis. A project-level conformity determination was also conducted. Implementation of the proposed project would not adversely affect air quality of the region. No mitigation is required.



2.16 Noise

This section evaluates potential noise and vibration impacts on nearby noise-sensitive areas resulting from the proposed project. The detailed analysis, including input and output data, is contained in the Noise Study Report (NSR) (Parsons, March 2010), NSR Addendum (Parsons, July 2010), and Noise Abatement Decision Report (NADR) (Parsons, April 2010 and revised September 2010).

2.16.1 Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote 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.

2.16.1.1 California Environmental Quality Act

CEQA requires a strictly baseline-versus-build analysis to assess whether a proposed project will 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 project unless such measures are not feasible.

Under CEQA, a substantial noise increase may result in a significant adverse environmental effect and, if so, must be mitigated or identified as a noise impact for which it is likely that no or only partial abatement measures are available. Per the Los Angeles CEQA Thresholds Guide, proposed project operations would normally pose a significant noise impact if they cause the ambient noise level measured at the property line of affected uses to increase by 3 decibels (dB) in community noise equivalent level (CNEL) to or within the “normally unacceptable” or “clearly unacceptable” category, or any 5 dB or greater noise increase.

2.16.1.2 National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the federal-Aid Highway Act of 1970 and the associated 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 contain 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 2.16-1 lists the NAC for use in the NEPA 23 CFR 772 analysis.

**Table 2.16-1
Noise Abatement Criteria**

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA L _{eq} (h)	Description of Activities
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	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above.
D	–	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

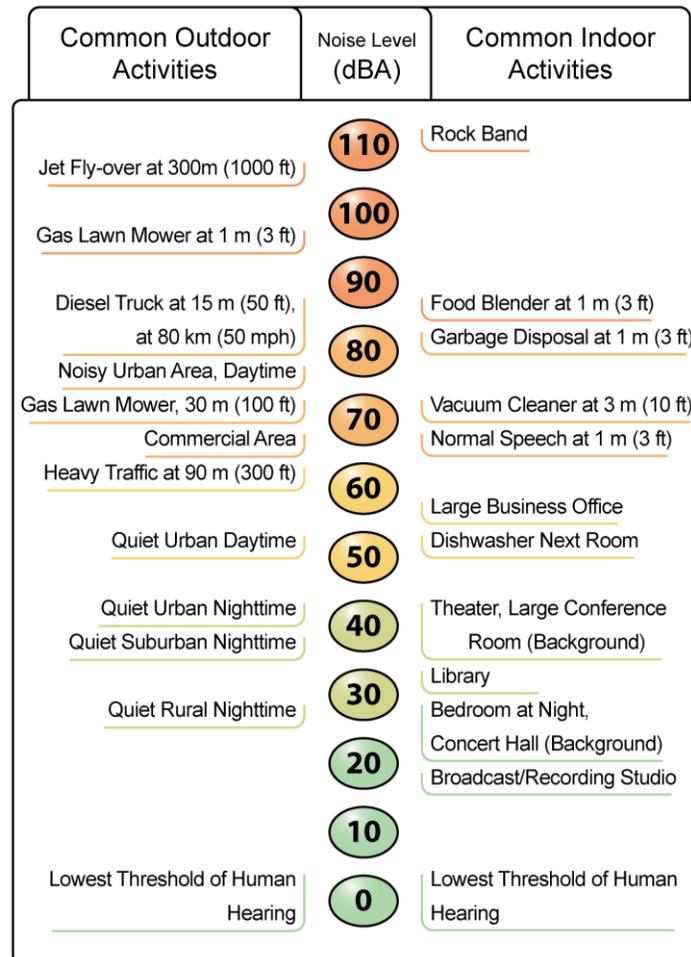
Source: 23 CFR 772.

Figure 2.16-1 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.

In accordance with the Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the 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 project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is feasible and reasonable. The feasibility of a noise abatement measure is primarily an acoustical criterion. A minimum 5-dB reduction in the future noise level must be achieved for an abatement measure to be considered feasible. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.



**Figure 2.16-1
Noise Levels of Common Activities**

2.16.2 Fundamental of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans' Technical Noise Supplement (TeNS) (Caltrans, 2009), a technical supplement to the Protocol, that is available on the Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf).

2.16.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the

sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

2.16.2.2 Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

2.16.2.3 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (μPa). One μPa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 μPa . Because of this huge range of values, sound is rarely expressed in terms of μPa . Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 μPa .

2.16.2.4 Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB—rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

2.16.2.5 A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000 Hz to 8,000 Hz, and they perceive sounds within that range better than sounds of the same amplitude in

higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Figure 2.16-1 describes typical A-weighted noise levels for various noise sources.

2.16.2.6 Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound; however, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz to 8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible; however, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Furthermore, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness; therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

2.16.2.7 Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis:

- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period.

The 1-hour A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and FHWA.

- **Percentile-Exceeded Sound Level (L_n):** L_n represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time).
- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period.
- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m.
- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn} , CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m., and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m.

2.16.2.8 Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path; hence, they can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors, such as air temperature, humidity, and turbulence, can also have significant effects.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receiver is rarely effective in reducing noise because it does not create a solid barrier.

2.16.3 Affected Environment

A noise study was performed for the proposed project. Detailed methodologies, input and output data, and analytical results are presented in the *NSR and NSR Addendum for the John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project*.

2.16.3.1 Existing Condition

The project site is urbanized and fully developed. The northern portion of the study area is composed primarily of industrial uses serving the Port. The southern portion of the proposed project area consists of residential neighborhoods separated by freeways, while the eastern portion is dominated by the Port terminal facilities. The western portion of the study area consists mostly of commercial uses. Port operations dominate the activity in the area. Residential neighborhoods line the proposed project study area.

Using I-110 as the north/south divide and SR 47 as the east/west divide, the first area of residential properties in the study area is the northeast quadrant, which is encircled by NB I-110, SB SR 47, and Pacific Avenue. Most of the residences in this area are single-family houses, with only a few multi-family properties. In addition, several of the single-family residences include guest houses as part of the same property and are being counted as only one property regardless of occupancy situations. The Harbor Occupational Center is a secondary education center operated by the Los Angeles Unified School District (LAUSD) located north of SB SR 47 and east of Pacific Avenue. The only frequent outdoor use area on this property is a small eating area behind the building.

The second residential area is located in the northwest quadrant of the I-110/SR 47 interchange and is bordered by SB I-110, SB SR 47, and North Gaffey Street. Single-family residences with frequent outdoor use areas were the only type of development identified in this area. These residences are located approximately 50 feet above I-110.

The third residential area is located along NB SR 47 in the southeast quadrant of the I-110/SR 47 interchange. The frequent outdoor land use in this area is largely residential, with two commercial properties on either side of Pacific Avenue near the SR 47/Pacific Avenue undercrossing. There are no outdoor use areas at these commercial properties. East of Pacific Avenue, the residential areas are mostly single-family residences, with a few multi-family properties. The properties east of Pacific Avenue and to the south of NB SR 47 are elevated approximately 30 feet above the highway. West of Pacific Avenue, the residential areas along the freeway are located relatively even with traffic lanes in terms of elevation.

The area underneath the Channel Street Overhead is being used by a group of skateboarders from the neighboring areas for skateboarding activities (referred to as Channel Street Skate Facility). Since 2003, several skating structures have been built, and skateboarders come to use the facility at their own risk.

2.16.3.2 Existing Noise Levels

A field investigation was conducted to identify frequent outdoor use areas that could be subject to traffic and construction noise impacts from the proposed project and to consider the geometry of the freeway alignment relative to those areas. Noise measurement sites are locations where noise measurements are taken to determine existing noise levels and to verify or calibrate computer noise models. These sites are chosen to be representative of frequent outdoor use areas. Locations that are expected to receive the greatest traffic noise impacts, such as the first row of houses from the noise source, are generally chosen. Noise measurements were mainly conducted in frequent outdoor human-use areas along the project alignment, with backyard locations held at

the highest priority; however, due to access issues, some of the short-term measurements were conducted within a nearby front yard or sidewalk location determined to be acoustically representative of the actual backyard use area. Permissions to access properties for conducting noise measurements were granted in person during the field visits. All measurement sites were selected so that there would be no unusual noises from sources such as dogs, air conditioners, pool pumps, or children that could affect the measured levels. It is desirable to choose sites that are free of major obstructions or contamination.

Frequent outdoor use areas that might be affected by the proposed project include single- and multi-family residences, a secondary educational center, and a recreational skate facility that are located in close proximity to the project corridor. Noise measurements were taken at 13 representative locations within the project study area in February, May, and November 2009. Short-term measurements were conducted at 10 locations for a duration of 20 minutes each, and long-term measurements were conducted at 3 locations for at least 24 hours. Figure 2.16-2 shows the locations of noise receptors and noise measurement sites. Results for the short-term and long-term measurements are presented in Tables 2.16-2 and 2.16-3, respectively.

2.16.3.3 Future Predicted Noise Levels

Noise modeling was performed to determine potential future traffic noise impacts at frequent human outdoor use areas within the boundaries of the proposed project for the future design year (2035). The future worst-case traffic noise levels at the frequent outdoor human use areas along the project corridor were modeled for the Build Alternative to determine the appropriate abatement measures. The following subsections briefly discuss the traffic noise prediction methods and the results. Detailed information about traffic noise modeling is contained in the Noise Study Report (Parsons, 2010)

Traffic Noise Level Prediction Methods

The FHWA traffic noise model, TNM 2.5, was used for the noise computations (FHWA, 2004). TNM 2.5 input is based on a three-dimensional grid created for the study area to be modeled. All roadway, barrier, terrain lines, and receiver points are defined by their x, y, and z coordinates. Roadways, terrain lines, and barriers are coded into TNM 2.5 as line segments defined by their end points. Receivers, defined as single points, are typically located at frequent outdoor use areas such as residences, schools, and recreational areas. Receivers are modeled at a height of 5 feet above ground elevation.

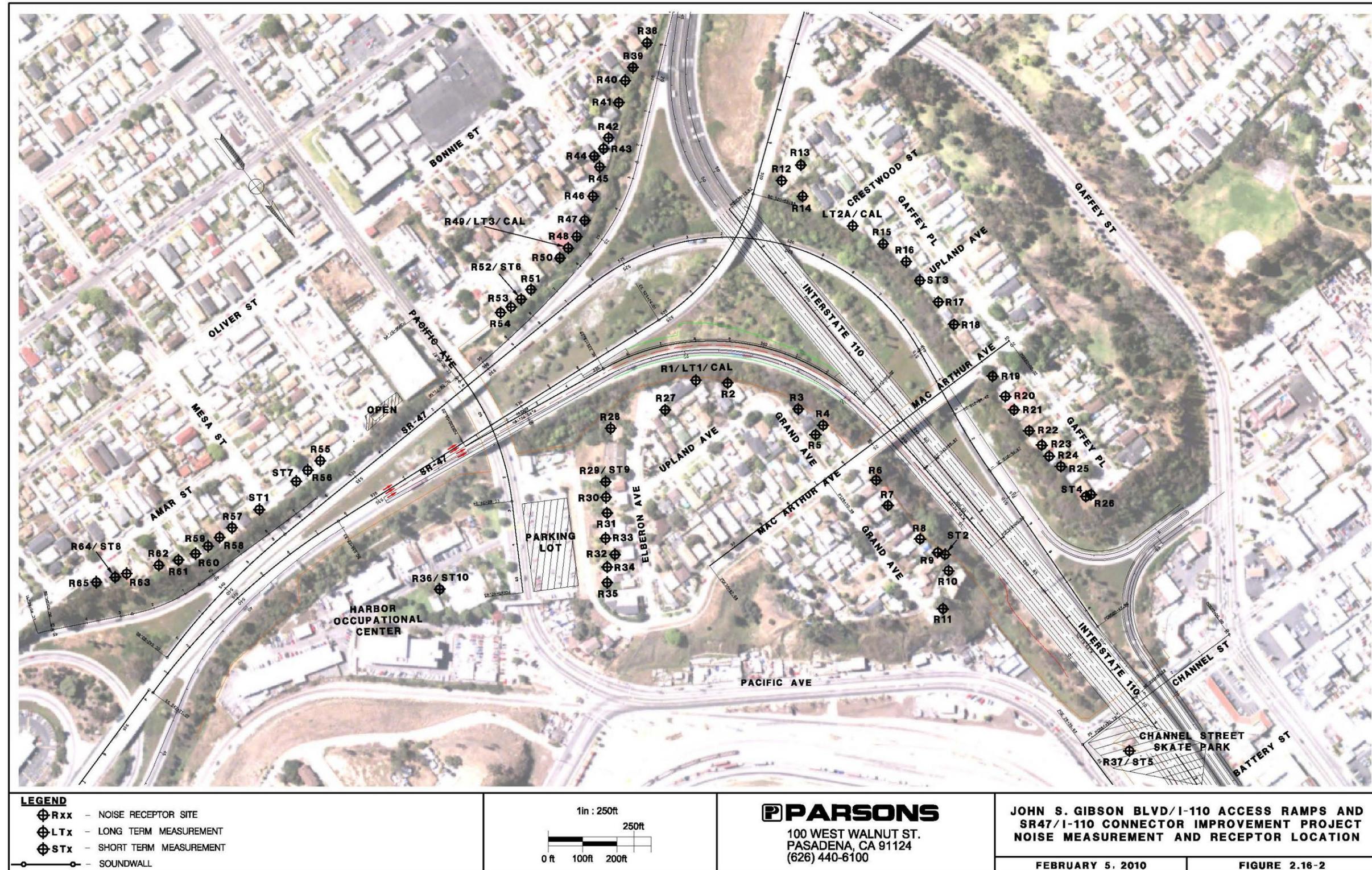


Figure 2.16-2 Noise Receptor and Noise Measurement Site Location

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**Table 2.16-2
Short-Term Noise Measurement Results**

Site No. ¹	Street Address	Land Use ²	Activity Category and (NAC)	Measurement Dates	Start Time	Measured Leq(h) ₃ , dBA ³	Adjusted Peak-Hour Leq(h) ₄ , dBA ⁴	Adjusted to Long-Term Site
ST1	616 N Mesa Street	SFR	B (67)	2/19/2009	15:20	64.7	64.7	LT1
ST2	955 N Grand Avenue	SFR	B (67)	2/19/2009	14:20	63.4	64.0	LT1
ST3	680 W Upland Avenue	SFR	B (67)	2/19/2009	16:00	67.1	69.6	LT2
ST4	964 N Gaffey Place	SFR	B (67)	2/19/2009	15:20	67.9	70.2	LT2
ST5	Channel Street Skate Facility	REC	B (67)	5/12/2009	07:00	66.9	--	--
ST6	536 Bonita Street	SFR	B (67)	11/10/2009	13:20	73.2	74.0	LT3
ST7	623 N Mesa Street	SFR	B (67)	11/10/2009	14:00	62.1	64.5	LT3
ST8	318 W Amar Street	SFR	B (67)	11/11/2009	10:00	60.2	61.4	LT3
ST9	457 W Elberon Avenue	SFR	B (67)	11/10/2009	12:40	61.8		LT3
ST10	Harbor Occupational Center, 740 N Pacific Avenue	SCH	B (67)	11/18/2009	07:40	60.4	--	--

Notes:

- 1: ST – Short-Term Measurements.
- 2: Land Use: SFR – single-family residence; REC – recreational use.
- 3: Short-term measured noise levels were measured for a period of 20 minutes.
- 4: Measurements conducted during off-peak hours were adjusted to the peak-hour Leq(h) based on a comparison with long-term noise levels measured at a nearby measurement site, listed in the last column. Measurements at ST5 and ST10 were conducted during traffic noise peak hour. At these locations, microphone positions were selected that were directly adjacent to the indicated addresses and locations, with equivalent exposure to traffic noise.

Source: Noise Study Report, Parsons 2010.

**Table 2.16-3
Long-Term Noise Measurement Results**

Site No. ¹	Street Address	Land Use ²	Activity Category and (NAC)	Measurement Dates	Start Time	Measured Peak-Hour Leq(h) ₃ , dBA ³	Peak-Hour Time
LT1	570 W Elberon Avenue	SFR	B (67)	2/18/2009 to 2/19/2009	16:02	64.6	15:00 – 16:00
LT2	678 W Crestwood Avenue	SFR	B (67)	2/18/2009 to 2/19/2009	16:55	69.7	06:00 – 07:00
LT3	566 Bonita Street	SFR	B (67)	11/17/2009 to 11/18/2009	10:23	67.5	07:00 – 08:00

Notes:

- 1: LT – Long-Term Measurements.
- 2: Land Use: SFR – single-family residence; REC – recreational use.
- 3: The measured peak-hour noise level is used to adjust short-term measurements to peak hour.

Source: Noise Study Report, Parsons 2010.

To determine the noise levels generated by traffic, the TNM 2.5 computer program requires inputs of traffic volumes, speeds, and vehicle types. Three vehicle types were input into the model: cars, medium trucks, and heavy trucks. The propagation path between source and receiver is modeled in TNM 2.5 by specifying special terrain features, rows of houses or building structures, and existing walls. Propagation of noise can be further specified by selecting ground types such as hard soil, loose soil, pavement, lawn, and field grass. The lawn option was chosen as the overall ground type for this study. All other natural obstructions, such as cuts and fills that could affect the future predicted noise levels were also included in the input file.

Traffic noise is a function of, among other factors, traffic volumes and traffic speed. Noise increases with speed and higher volumes of traffic; however, at higher volumes, speed decreases (stop and go), so the worst-case noise levels are experienced when there is a balance between the volume and speed. For purposes of determining noise impacts, the worst-case traffic noise occurs when traffic is operating under Level of Service (LOS) C conditions. Under these conditions, traffic is heavy, but it remains free flowing. The predicted future peak-hour traffic volumes were obtained from the approved Traffic Study prepared for this project (Iteris, 2009). At certain segments of the roadways within the noise modeling boundary where predicted future traffic volume is not available, the future volumes were obtained by applying the growth rates from the traffic study to the existing peak-hour traffic volumes obtained from the Caltrans Web site (Caltrans, 2008).

Traffic Noise Model Calibration

Noise measurements taken for the purpose of calibrating the noise model were conducted at one short-term and three long-term measurement sites. Traffic counts were recorded during the noise measurements. The traffic counts were tabulated according to three vehicle types, including automobiles, medium trucks (2-axle with 6 wheels but not including dually pick-up trucks), and heavy trucks (3-or-more-axle vehicles). The field observations and measured data were used to calibrate the traffic noise model.

To validate the accuracy of the model, TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. Traffic volumes manually counted during the measurement periods were normalized to 1-hour volumes. These normalized volumes were assigned to the corresponding project area roadways to simulate the noise source strength at the roadways during the actual measurement periods. Modeled and measured sound levels were then compared to determine the accuracy of the model and if additional calibration of the model was necessary.

According to the Caltrans' TeNS, given the inherent uncertainties in the measurements and calibration procedures, model calibration should definitely not be attempted when calculated and measured noise levels agree within ± 1 dB; however, if the modeled and measured values are between 1 and 2 dB and there is great confidence in the accuracy and results of the measurements, calibration may be attempted (Caltrans, 2009).

Short-term measurement data at four locations (LT1, LT2A, LT3, and ST8) were used for model calibration. After inputting the traffic counts, site geometry, and any other pertinent existing features, noise levels at the calibration sites were calculated in the TNM modeling software. The modeled noise levels were compared to the measured levels where discrepancies were studied to determine if the TNM model needed to be adjusted or whether a calibration factor was more applicable. Modeled noise levels at calibration locations LT1, LT2A, LT3, and ST8 were within ± 1 dB difference from the measured noise levels; therefore, no calibration factor is required.

Predicted Noise Level

Table 2.16-4 summarizes traffic noise levels for existing conditions (2009), modeled noise level of year 2009 and design year 2035 under Build and No Build conditions. Under the year 2009 scenario, no increase in the ambient noise level is expected in the vicinity of the project area as a result of the proposed project. Conversely, a one decibel decrease would occur at a few receptor locations (Receptors R1, R2, R29, R30, R32, and R35) because primarily of the slight change in roadway vertical profile and horizontal alignment near these receptors. Also, a 4 decibel decrease would occur at Receptor R37, the skate park, because the widened roadway deck would provide additional noise shielding to this location.

Predicted Year 2035 traffic noise levels with the proposed project are compared to existing conditions (without the proposed project) and to the Year 2035 under the no-project conditions. The comparison to existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The comparison to no-project conditions indicates the direct effect of the project. As stated in the TeNS, modeling results are rounded to the nearest decibel before comparisons are made. In some cases, this can result in relative changes that may not appear intuitive. An example would be a comparison between sound levels of 64.4 and 64.5 dBA. The difference between these two values is 0.1 dB; however, after rounding, the difference is reported as 1 dB.

**Table 2.16-4
Traffic Noise, Leq(h), Prediction Summary (dBA)**

Receiver I.D.	Barrier I.D. and Location	Land Use ²	Number of Dwelling Units	Existing Noise Level Leq(h), dBA ^{1,3}	Modeled Existing Year Noise Level without Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project minus No Project Conditions Leq(h), dBA	John S. Gibson Boulevard Interchange Future Worst Hour Noise Levels - Leq(h), dBA ¹																				
								Design Year Noise Level without Project Leq(h), dBA ¹	Design Year Noise Level with Project Leq(h), dBA ¹	Design Year Noise Level without Project Minus Existing Conditions Leq(h), dBA ^{1,6}	Design Year Noise Level with Project minus No Project Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type ⁴	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
														8 feet			10 feet			12 feet			14 feet			16 feet		
														Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1	S340 / R/W	SFR	2	65 ^{MLT1, CAL}	67	66	-1	69	68	4	-1	B (67)	A/E	59 ^{RT}	9	2	58	10	2	56	12	2	55	13	2	54	14	2
R 2		SFR	2	65 ^E	68	67	-1	69	69	4	0	B (67)	A/E	61 ^{RT}	8	2	60	9	2	59	10	2	58	11	2	57	12	2
R 3		SFR	1	66 ^E	70	70	0	70	70	4	0	B (67)	A/E	62 ^{RT}	8	1	61	9	1	59	11	1	58	12	1	58	12	1
R 4 ^C		SFR	1	67 ^E	70	70	0	71	71	4	0	B (67)	A/E	62 ^{RT}	9	1	61	10	1	59	12	1	58	13	1	57	14	1
R 5 ^B		SFR	1	59 ^E	62	62	0	63	62	4	-1	B (67)	NONE	59 ⁵	3		59	3		58	4		57	5	1	57	5	1
R 6	S346 / R/W	SFR	3	65 ^E	68	68	0	69	69	4	0	B (67)	A/E	64 ^{RT}	5	3	63	6	3	62	7	3	61	8	3	61	8	3
R 7		SFR	2	65 ^E	68	68	0	68	68	3	0	B (67)	A/E	63 ^{RS}	5	2	62	6	2	60	8	2	59	9	2	59	9	2
R 8		SFR	2	64 ^E	66	66	0	67	67	3	0	B (67)	A/E	62 ^{RT}	5	2	61	6	2	60	7	2	59	8	2	59	8	2
R 9 ^C		SFR	1	68 ^{MLST2}	71	71	0	72	72	4	0	B (67)	A/E	63 ^{RT}	9	1	62	10	1	61	11	1	60	12	1	59	13	1
R 10 ^B		MFR	2	59 ^E	62	62	0	63	63	4	0	B (67)	NONE	59 ⁵	4		59	4		58	5	2	57	6	2	57	6	2
R 11 ^C	Private Property	SFR	1	68 ^E	71	71	0	72	72	4	0	B (67)	A/E	62 ^{RT}	10	1	60	12	1	59	13	1	58	14	1	57	15	1
R 12	S241 / R/W	SFR	1	69 ^E	70	70	0	71	71	2	0	B (67)	A/E	63	8	1	61	10	1	60 ^{RT}	11	1	59	12	1	58	13	1
R 13 ^B		SFR	1	59 ^E	60	60	0	61	61	2	0	B (67)	NONE	60	1		60	1		60 ⁵	1		57	4		58	3	
R 14		SFR	1	69 ^E	70	70	0	70	70	1	0	B (67)	A/E	63	7	1	61	9	1	61 ^{RT}	9	1	59	11	1	58	12	1
R 15 ^C		SFR	2	70 ^{MLT2}	71	71	0	71	71	1	0	B (67)	A/E	61 ^{RT}	10	1	60	11	1	59	12	1	58	13	1	57	14	1
R 16		SFR	2	69 ^E	70	70	0	71	71	2	0	B (67)	A/E	62 ^{RT}	9	1	60	11	1	58	13	1	58	13	1	57	14	1
R 17		SFR	2	69 ^{MLST3}	70	70	0	71	71	2	0	B (67)	A/E	61 ^{RT}	10	1	60	11	1	58	13	1	57	14	1	56	15	1
R 18		SFR	2	70 ^E	71	71	0	71	71	1	0	B (67)	A/E	62 ^{RT}	9	1	61	10	1	59	12	1	58	13	1	57	14	1

Notes:

- 1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational.
- 3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated noise level.
- 4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 5 - Barrier height needed to meet requirements at adjacent receptor(s).
- 6 - Wooden fences and other non-permanent or movable structures are not included in the design year traffic noise models.

- C - Critical design receiver.
- R - The minimum height to meet feasibility requirements of Department's Noise Abatement Criteria.
- T - Minimum height required to block the line-of-sight from the receptor to truck exhaust stacks.
- U - Unable to block the line-of-sight path from the receptor to truck exhaust stacks.
- W - Includes the benefit of an existing property wall.
- B - Includes the benefit of an existing building or building row.
- * - Receptor R27 requires both Soundwall S340 and S332 to reach the 5 dB NAC.

**Table 2.16-4 (Continued)
Traffic Noise, Leq(h), Prediction Summary (dBA)**

Receiver I.D.	Barrier I.D. and Location	Land Use ²	Number of Dwelling Units	Existing Noise Level Leq(h), dBA ^{1,3}	Modeled Existing Year Noise Level without Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project minus No Project Conditions Leq(h), dBA	John S. Gibson Boulevard Interchange Future Worst Hour Noise Levels - Leq(h), dBA ¹																				
								Design Year Noise Level without Project Leq(h), dBA ¹	Design Year Noise Level with Project Leq(h), dBA ¹	Design Year Noise Level without Project Minus Existing Conditions Leq(h), dBA ^{1,6}	Design Year Noise Level with Project minus No Project Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type ⁴	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
														8 feet			10 feet			12 feet			14 feet			16 feet		
														Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 19	S247 / R/W	SFR	1	70 ^E	71	71	0	71	71	1	0	B (67)	A/E	64 ^{RT,7}	7	1	63	8	1	62	9	1	62	9	1	62	9	1
R 20		SFR	2	71 ^E	72	72	0	72	72	1	0	B (67)	A/E	62 ^{RT}	10	2	60	12	2	59	13	2	58	14	2	57	15	2
R 21		SFR	1	71 ^E	72	72	0	73	73	2	0	B (67)	A/E	63 ^{RT}	10	1	61	12	1	59	14	1	58	15	1	58	15	1
R 22		SFR	2	71 ^E	72	72	0	73	73	2	0	B (67)	A/E	63 ^{RT}	10	2	61	12	2	59	14	2	59	14	2	58	15	2
R 23 ^C		SFR	1	69 ^E	72	72	0	73	73	4	0	B (67)	A/E	62 ^{RT}	11	1	61	12	1	59	14	1	58	15	1	58	15	1
R 24		SFR	1	69 ^E	72	72	0	72	72	3	0	B (67)	A/E	62 ^{RT}	10	1	61	11	1	59	13	1	58	14	1	57	15	1
R 25		SFR	1	69 ^E	72	72	0	72	72	3	0	B (67)	A/E	62 ^{RT}	10	1	61	11	1	59	13	1	58	14	1	57	15	1
R 25A		SFR	1	69 ^E	72	72	0	72	73	3	1	B (67)	A/E	62 ^{RT}	11	1	60	13	1	58	15	1	57	16	1	57	16	1
R 26		SFR	1	68 ^{MST4}	71	71	0	72	72	4	0	B (67)	A/E	61 ^{RT,7}	11	1	60	12	1	59	13	1	58	14	1	57	15	1
R 27*	S331 / Shoulder & R/W	SFR	3	63 ^E	65	65	0	67	67	4	0	B (67)	A/E	63	4		62	5	1	61	6	1	60 ^{RT}	7	1	57	10	3
R 28 ^C		SFR/MFR	3	64 ^E	65	65	0	67	67	3	0	B (67)	A/E	64	3		60	7	3	59 ^{RT}	8	3	57	10	3	57	10	3
R 29		SFR/MFR	3	63 ^{MST9}	65	64	-1	67	66	4	-1	B (67)	A/E	62	4		62	4	1	61 ^{RT}	5	3	58	8	3	57	9	3
R 30		SFR	1	62 ^E	64	63	-1	66	65	4	-1	B (67)	NONE	62	3		62	3		61	4		58	7	1	57	8	1
R 31		SFR	3	61 ^E	63	63	0	65	65	4	0	B (67)	NONE	62	3		61	4		61	4		58	7	3	57	8	3
R 32		SFR	1	61 ^E	63	62	-1	65	64	4	0	B (67)	NONE	61	3		61	3		61	3		57	7	1	56	8	1
R 33		SFR	1	59 ^E	61	61	0	63	63	4	0	B (67)	NONE	60	3		60	3		60	3		57	6	1	56	7	1
R 34		SFR	1	60 ^E	62	62	0	64	64	4	0	B (67)	NONE	61	3		60	4		61	3		57	7	1	56	8	1
R 35		SFR	1	60 ^E	62	61	-1	63	63	3	0	B (67)	NONE	60	3		60	3		60	3		57	6	1	56	7	1
R 36 ^B		SCH	1	58 ^{MST10}	60	60	0	62	62	4	0	B (67)	NONE	59	3		61	1		55	7	1	54	8	1	53	9	1
R 37	Shoulder	REC	1	64 ^{MST5}	66	62	-4	68	63	4	-5	B (67)	NONE	61	2		61	2		60	3		60	3		59	4	

Notes:

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- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational.
- 3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated noise level.
- 4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 5 - Barrier height needed to meet requirements at adjacent receptor(s).
- 6 - Wooden fences and other non-permanent or movable structures are not included in the design year traffic noise models.
- 7 - Property owner has declined the placement of a soundwall along this property.
- C - Critical design receiver.
- R - The minimum height to meet feasibility requirements of Department's Noise Abatement Criteria.
- T - Minimum height required to block the line-of-sight from the receptor to truck exhaust stacks.
- U - Unable to block the line-of-sight path from the receptor to truck exhaust stacks.
- W - Includes the benefit of an existing property wall.
- B - Includes the benefit of an existing building or building row.

**Table 2.16-4 (Continued)
Traffic Noise, Leq(h), Prediction Summary (dBA)**

Receiver I.D.	Barrier I.D. and Location	Land Use ²	Number of Dwelling Units	Existing Noise Level Leq(h), dBA ^{1,3}	Modeled Existing Year Noise Level without Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project minus No Project Conditions Leq(h), dBA	John S. Gibson Boulevard Interchange Future Worst Hour Noise Levels - Leq(h), dBA ¹																					
								Design Year Noise Level without Project Leq(h), dBA ¹	Design Year Noise Level with Project Leq(h), dBA ¹	Design Year Noise Level without Project Minus Existing Conditions Leq(h), dBA ^{1,6}	Design Year Noise Level with Project minus No Project Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type ⁴	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)															
														8 feet			10 feet			12 feet			14 feet			16 feet			
														Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	
R 38A ^B	S24 / R/W	SFR	1	69 ^E	70	70	0	70	70	1	0	B (67)	A/E	65	5	1	63 ^{R,T}	7	1	62	8	1	61	9	1	60	10	1	
R 38 ^C		SFR	2	74 ^E	74	74	0	75	75	1	0	B (67)	A/E	73	2	1	69	6	2	65 ^{R,T}	10	2	63	12	2	61	14	2	
R 39		SFR	1	71 ^E	71	71	0	71	71	0	0	B (67)	A/E	67	4	1	64 ^T	7	1	62	9	1	61 ^{R,5}	10	1	60	11	1	
R 39A		-	--	71 ^E	71	71	0	71	71	0	0	B (67)	A/E	71	0	1	71	0	68	3	65 ^T	6	63	8					
R 40		SFR	1	70 ^E	70	70	0	70	70	0	0	B (67)	A/E	66	4	1	63 ^T	7	1	62	8	1	60 ^{R,5}	10	1	59	11	1	
R 40A		SFR	1	69 ^E	68	68	0	69	69	0	0	B (67)	A/E	67	2	66	3	63	6	1	62 ^{R,T}	7	1	61	8	1			
R 41		SFR	1	67 ^E	70	70	0	70	70	3	0	B (67)	A/E	67	3	64 ^T	6	1	62	8	1	60 ^{R,5}	10	1	59	11	1		
R 42		SFR	1	66 ^E	69	69	0	70	70	4	0	B (67)	A/E	70	0	68	2	64	6	1	62 ^{R,T}	8	1	60	10	1			
R 43		SFR	1	66 ^E	69	69	0	70	70	4	0	B (67)	A/E	70	0	68	2	64	6	1	61 ^{R,T}	9	1	60	10	1			
R 44 ^B		SFR	1	64 ^E	67	67	0	68	68	4	0	B (67)	A/E	68	0	67	1	64	4	61 ^{R,T}	7	1	59	9	1				
R 45		SFR	1	66 ^E	69	69	0	70	70	4	0	B (67)	A/E	70	0	70	0	67	3	63 ^{R,T}	7	1	61	9	1				
R 46		SFR	1	66 ^E	69	69	0	70	70	4	0	B (67)	A/E	70	0	67	3	63	7	1	60 ^{R,T}	10	1	59	11	1			
R 47		SFR	1	67 ^E	69	69	0	71	71	4	0	B (67)	A/E	70	1	67	4	63	8	1	61 ^{R,T}	10	1	59	12	1			
R 48 ^W		SFR	1	67 ^E	70	70	0	71	71	4	0	B (67)	A/E	65	6	1	62	9	1	60 ^T	11	1	59 ^{R,5}	12	1	58	13	1	
R 49 ^W		SFR	1	68 ^{MLT3,CAL}	70	70	0	72	72	4	0	B (67)	A/E	65	7	1	62 ^T	10	1	61	11	1	59 ^{R,5}	13	1	58	14	1	
R 50 ^W		SFR	1	72 ^E	71	71	0	72	72	0	0	B (67)	A/E	68	4	64	8	1	62 ^T	10	1	60 ^{R,5}	12	1	59	13	1		
R 50A		SFR	1	72 ^E	71	71	0	72	72	0	0	B (67)	A/E	72	0	70	2	68	4	64 ^R	8	1	62 ^U	10	1				
R 51		MFR	2	74 ^E	73	73	0	74	74	0	0	B (67)	A/E	72	2	70	4	68	6	2	65 ^{R,5}	9	2	62 ^U	12	2			
R 52		SFR	1	74 ^{MST6}	73	73	0	74	74	0	0	B (67)	A/E	69	5	1	66	8	1	64	10	1	63 ^{R,5}	11	1	61 ^U	13	1	
R 53 ^B		SFR	1	73 ^E	72	72	0	73	74	0	1	B (67)	A/E	67	7	1	66	8	1	64 ^{R,5}	10	1	62	12	1	60 ^U	14	1	
R 54 ^W	SFR	1	68 ^E	67	67	0	68	68	0	0	B (67)	A/E	64 ^T	4	62 ^R	6	1	61	7	1	59	9	1	58	10	1			

Notes:

- 1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational.
- 3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated noise level.
- 4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 5 - Barrier height needed to meet requirements at adjacent receptor(s).
- 6 - Wooden fences and other non-permanent or movable structures are not included in the design year traffic noise models.
- 7 - Property owner has declined the placement of a soundwall along this property.
- C - Critical design receiver.
- R - The minimum height to meet feasibility requirements of Department's Noise Abatement Criteria.
- T - Minimum height required to block the line-of-sight from the receptor to truck exhaust stacks.
- U - Unable to block the line-of-sight path from the receptor to truck exhaust stacks.
- W - Includes the benefit of an existing property wall.
- B - Includes the benefit of an existing building or building row.

**Table 2.16-4 (Continued)
Traffic Noise, Leq(h), Prediction Summary (dBA)**

Receiver I.D.	Barrier I.D. and Location	Land Use ²	Number of Dwelling Units	Existing Noise Level Leq(h), dBA ^{1,3}	John S. Gibson Boulevard Interchange Future Worst Hour Noise Levels - Leq(h), dBA ¹																							
					Modeled Existing Year Noise Level without Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project Leq(h), dBA ¹	Modeled Existing Year Noise Level with Project minus No Project Conditions Leq(h), dBA	Design Year Noise Level without Project Leq(h), dBA ¹	Design Year Noise Level with Project Leq(h), dBA ¹	Design Year Noise Level without Project Minus Existing Conditions Leq(h), dBA ^{1,6}	Design Year Noise Level with Project minus No Project Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type ⁴	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
														8 feet			10 feet			12 feet			14 feet			16 feet		
														Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 55	S40 / R/W	SFR	1	62 ^E	67	67	0	69	69	7	0	B (67)	A/E	60 ^{R,T}	9	1	59	10	1	57	12	1	56	13	1	55	14	1
R 56 ^B		SFR	1	62 ^{M,ST7}	67	67	0	68	69	6	1	B (67)	A/E	59 ^{R,T}	10	1	58	11	1	56	13	1	55	14	1	55	14	1
R 57		SFR	1	65 ^E	70	70	0	71	72	6	1	B (67)	A/E	62 ^{R,T}	10	1	60	12	1	59	13	1	58	14	1	57	15	1
R 58		SFR	1	66 ^E	71	71	0	72	72	6	0	B (67)	A/E	62 ^{R,T}	10	1	61	11	1	59	13	1	58	14	1	57	15	1
R 59		SFR	1	66 ^E	71	71	0	72	72	6	0	B (67)	A/E	62 ^{R,T}	10	1	61	11	1	59	13	1	58	14	1	57	15	1
R 60 ^C		SFR	1	65 ^E	70	70	0	72	72	7	0	B (67)	A/E	62 ^{R,T}	10	1	61	11	1	59	13	1	58	14	1	57	15	1
R 61		SFR	1	64 ^E	69	69	0	71	71	7	0	B (67)	A/E	62 ^{R,T}	9	1	60	11	1	59	12	1	58	13	1	57	14	1
R 62		SFR	1	63 ^E	68	68	0	70	70	7	0	B (67)	A/E	61 ^{R,T}	9	1	59	11	1	58	12	1	58	12	1	57	13	1
R 63		SFR	1	61 ^E	67	67	0	68	68	7	0	B (67)	A/E	59 ^{R,T,7}	9	1	57	11	1	56	12	1	55	13	1	54	14	1
R 64		SFR	1	61 ^{M,ST8,CAL}	67	67	0	68	68	7	0	B (67)	A/E	60 ^{R,T,7}	8	1	58	10	1	56	12	1	55	13	1	54	14	1
R 65		SFR	1	62 ^E	68	68	0	68	69	6	1	B (67)	A/E	59 ^{R,T,7}	10	1	58	11	1	56	13	1	55	14	1	54	15	1

Notes:

- 1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational.
- 3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated noise level.
- 4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 5 - Barrier height needed to meet requirements at adjacent receptor(s).
- 6 - Wooden fences and other non-permanent or movable structures are not included in the design year traffic noise models.

- 7 - Property owner has declined the placement of a soundwall along this property.
- C - Critical design receiver.
- R - The minimum height to meet feasibility requirements of Department's Noise Abatement Criteria.
- T - Minimum height required to block the line-of-sight from the receptor to truck exhaust stacks.
- U - Unable to block the line-of-sight path from the receptor to truck exhaust stacks.
- W - Includes the benefit of an existing property wall.
- B - Includes the benefit of an existing building or building row.

Predicted noise levels in two areas were lower for the future build alternative than the future no-build alternative. Differences in the first area, represented by Receivers R29 and R30, are due to reduced traffic speeds in the future build alternative. The second area is near the Channel Street skate facility represented by Receiver R37. The future build condition will extend the bridge deck farther over the skate facility, cutting off more of the direct noise propagation path and reducing traffic noise levels for the future build condition.

Table 2.16-4 also shows the results of noise modeling for various heights of soundwall that could be used to minimize future noise impacts within the project area.

2.16.4 Environmental Consequences

2.16.4.1 Construction Impacts

No Build Alternative

There would be no construction under this alternative; therefore, no construction noise impacts would occur.

Build Alternative

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans' Standard Specifications, May 2006, Section 7-1.01I, Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations and that all equipment shall be fitted with adequate mufflers according to the manufacturers' specifications.

Table 2.16-5 summarizes noise levels produced by construction equipment commonly used on roadway construction projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 89 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans' Standard Specifications and would be short-term, intermittent, and dominated by local traffic noise.

2.16.4.2 Permanent Impacts

No Build Alternative

Under the No Build Alternative, there would be no improvements to the John S. Gibson Boulevard interchange and SR 47/I-110 Connector. Therefore noise level increase or decrease as a result of the proposed project would not occur; however, freeway traffic along the SR 47/I-110 Connector and I-110 Mainline would continue to increase at the natural growth rate.

**Table 2.16-5
Construction Equipment Noise**

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: FTA, 2006.

Modeling results, as shown in Table 2.16-4, indicate that predicted traffic noise levels ($L_{eq[h]}$) within the project study area for the year 2035 without project improvement would increase by 3 to 4 dBA at the receptors located along the east side of the SR 47/I-110 Connector; by 1 to 4 dBA at the receptors located along the west side of I-110; by 0 to 4 dBA at the receptors located along the south side of SR 47 west of Pacific Avenue; and by 6 to 7 dBA at the receptors located along the south side of SR 47 east of Pacific Avenue. No noise increase was predicted to occur at the Occupational Center, located north of SR 47, east of Pacific Avenue.

Based on the above information, under the No Build Alternative (without project condition), the receptors within the project SR 47/I-110 interchange would still be impacted by traffic noise. It should be noted that two soundwall projects are currently being proposed within the project area by the Los Angeles Metropolitan Transportation Authority (MTA), including East of Gaffey Street to West of Harbor Boulevard, northbound and eastbound, and North El Beron Avenue/ North Mac Arthur Avenue, northbound.

Build Alternative

Modeling results, as shown in Table 2.16-4, indicate that predicted traffic noise levels ($L_{eq[h]}$) within the project study area under the Build Alternative (with project improvement) and No Build Alternative (without project improvement) would result in no difference of more than 1 dBA in noise level. Therefore, it can be concluded that the project itself would not contribute to noise impacts to the surrounding area; however, because the predicted traffic noise levels in Year 2035 would approach or exceed the NAC of 67 dBA for Activity Category B land uses at many residences near I-110 and SR 47, noise impacts from freeway traffic are predicted to occur under the Build Alternative.

In accordance with 23 CFR 772, noise abatement is considered where traffic noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures identified in the Protocol include the following:

- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- Constructing noise barriers;
- Acquiring property to serve as a buffer zone;
- Using traffic management measures to regulate types of vehicles and speeds; and
- Acoustically insulating public-use or nonprofit institutional structures.

All of these abatement options have been considered; however, because of the configuration and location of the project, abatement in the form of noise barriers is the only abatement that is considered to be feasible. Noise barrier analysis was conducted by placing soundwalls at the highway mainline shoulders, on-/off-ramp shoulders, and ROW lines.

The analysis was conducted with barrier heights ranging from 8 feet to 16 feet. The barrier heights and locations were evaluated to determine if a minimum 5-dB attenuation at the outdoor frequent use areas of the representative receivers could be achieved. The minimum barrier height required to cut the line-of-sight from each receiver to the exhaust stacks of heavy trucks was calculated for all feasible barriers. These heights were evaluated through calculations performed by TNM 2.5. Acoustically feasible abatement measures were identified and warranted for eight areas, as shown graphically on Figure 2.16-3 and summarized in Table 2.16-6.

**Table 2.16-6
Summary of Noise Barrier Evaluation**

Barrier Number	Receptor Number	Type¹ and Number of Benefited Residences	Barrier Location/ Highway Side	Barrier Height / Total Length (ft)
S340	R1 - R4	6 SFR	ROW / Northbound	8 / 681
S346	R6 - R9	8 SFR	ROW / Northbound	8 / 427
S250	R11	1 SFR	Private Property / Northbound	8 / 88
S241	R12 - R18	6 SFR	ROW / Southbound	8 to 12 / 893
S247	R19 - R26	11 SFR	ROW / Southbound	8 / 498
S331	R27 - R30	3 SFR, 4 MFR	Shoulder and ROW / Southbound	8 to 14 / 853
S24	R38 - R53	18 SFR, 2 MFR	ROW / Northbound	10 to 14 / 1,121
S40	R55 - R65	11 SFR	ROW / Northbound	8 / 1,163

1 - Land Use: SFR - single-family residence, MFR - multi-family residence.

Source: Noise Study Report, Parsons 2010.

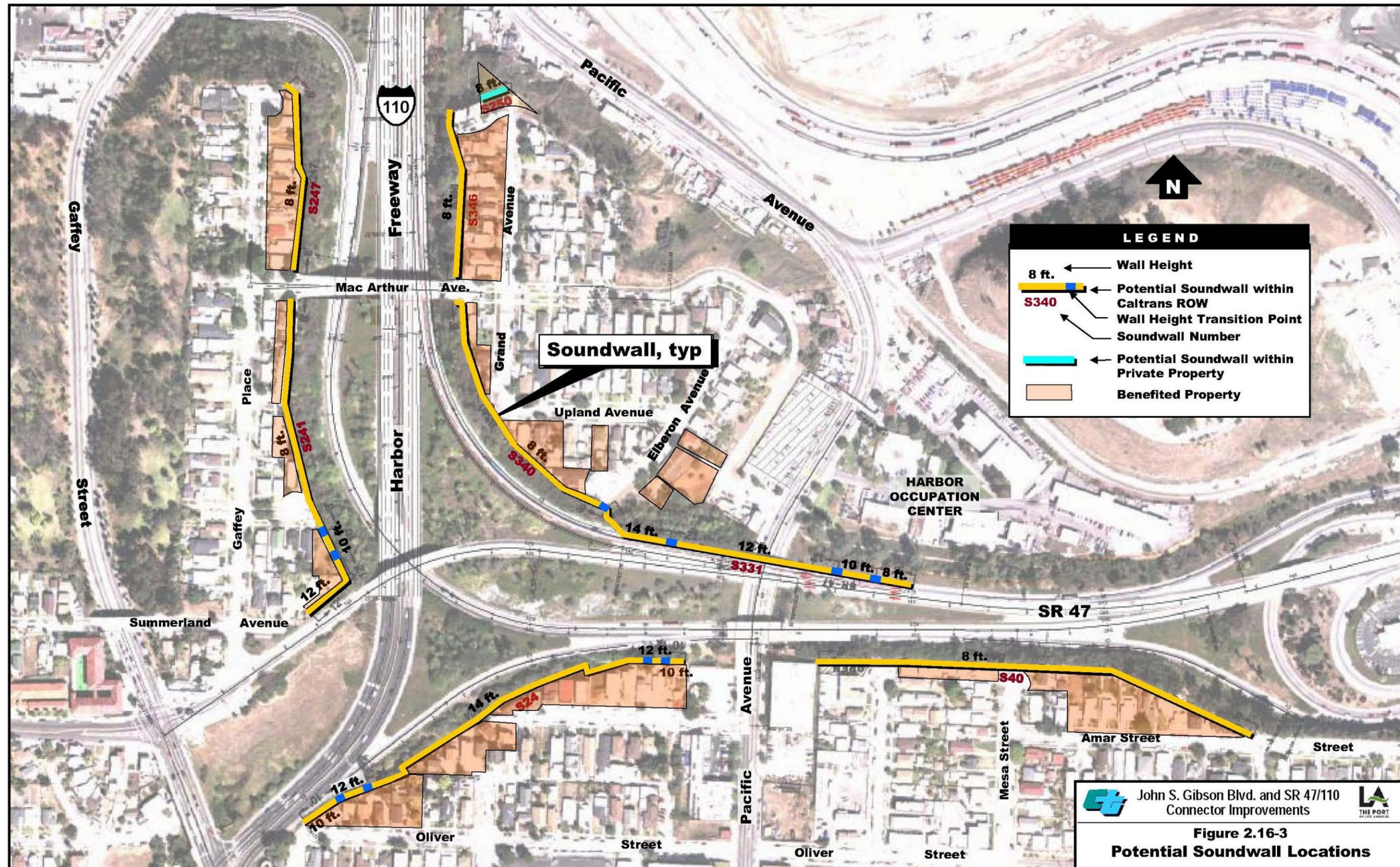


Figure 2.16-3 Potential Soundwall Locations

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The following paragraphs provide a description of each potential soundwall identified in the NSR.

Soundwall S340

This soundwall would be located along the ROW line between Stations 335+96 and 344+04 of the SB SR 47/NB I-110 connector. The soundwall would provide feasible noise abatement for the outdoor use areas of six single-family residences. These benefited residences are represented by Receptors R1 through R4. The height of this soundwall would be 8 feet.

Soundwall S346

Soundwall S346 would provide feasible traffic noise abatement for eight single-family residences represented by Receptors R6 through R9. The soundwall would be located along the ROW line of NB I-110 from Station 344+68 to Station 348+95. The height of this soundwall would be 8 feet.

Soundwall S250

Soundwall S250, located on private property, would provide acoustically feasible traffic noise abatement for the frequent outdoor use area of one single-family residence represented by Receiver R11. The height of this soundwall would be 8 feet. Receiver R11 represents a single-family residence that is located along NB I-110 at an elevated position from the I-110 roadway by approximately 40 feet. The backyard of this receiver also faces the local traffic intersection of Channel Street and Pacific Avenue, which is lower in elevation by approximately 90 feet. The abrupt changes in topography prevented the extension of soundwall S346 along the ROW line of NB I-110. The property lines for the residences represented by Receivers R10 and R11 extend beyond the sudden drop-off in elevation down the very steep slope to the commercial properties along Pacific Avenue. Furthermore, a soundwall placed at the shoulder of the State ROW would not provide the required 5-dB noise reduction due to the much lower elevations of the shoulder and ROW compared to the elevations of the residential backyards. The elevation at the property line is significantly lower than the residence's outdoor use area elevation; therefore, Soundwall S250 would have to be built well within the property of the residence to effectively abate traffic noise for this receiver.

Soundwall S241

Soundwall S241 would provide feasible traffic noise abatement for six single-family residences represented by Receptors R12 and R14 through R18. The soundwall would be located along the ROW line of SB I-110 from Stations 244+35 to 237+03 and along SB SR 47 from Stations 519+68 to 519+03. The height of this soundwall would be between 8 feet and 12 feet.

Soundwall S247

Soundwall S247 would be located along SB I-110 on the ROW line from Stations 244+95 to 249+83 and would provide feasible abatement from freeway traffic noise for 11 single-family residences represented by Receptors R19 through R26. The height of this soundwall would be 8 feet.

Soundwall S331

Soundwall S331 would be 8 feet to 14 feet in height placed on the shoulder of SB SR 47 from Stations 535+00 to 533+00 and continue along the shoulder of the SB SR 47/NB I-110 connector from Stations 330+38 to 335+00. At Station 335+00, the soundwall transitions from the shoulder of the SB SR 47/NB I-110 connector to the ROW and joins with Soundwall S340. This soundwall would cross the Pacific Avenue overcrossing from Stations 330+38 to 332+50. This soundwall would provide feasible noise abatement for three single-family and four multi-family residences represented by Receivers R27, R28, and R29. Receptor R27 requires both S331 and S340 to reach a 5-dB reduction. There is no other alternative location for a noise barrier at this site due to the geometry of the road and receivers. The ROW line along SR 47 experiences a sudden drop-off in elevation and is significantly lower than the elevation of the nearby receptor's outdoor use areas; therefore, the ROW line is not considered a practical location for soundwall placement.

Soundwall S24

This soundwall would provide feasible noise abatement for the outdoor use areas of 18 single-family and 2 multi-family residences. These benefited residences are represented by Receptors R38 through R53. The elevations of the residential backyards at the property lines of Receptors R42 through R47 are higher than the elevation of the ROW line due to a retaining wall and elevated patios. This soundwall would be located along the ROW between Stations 17+70 and 28+99 of the SB SR 47 on-ramp from Gaffey Street. The height of this soundwall would range from 10 feet to 14 feet.

Soundwall S40

Soundwall S247 would be located along NB SR 47 on the ROW line from SR 47 Station 532+52 to NB SR 47 Harbor Boulevard off-ramp Station 44+52 and would provide feasible abatement from freeway traffic noise for 11 single-family residences represented by Receptors R55 through R65. The height of this soundwall would be 8 feet.

Preliminary Noise Abatement Decision Report

23 CFR 772 requires that noise abatement measures that are reasonable and feasible and are likely to be incorporated into the project be identified before adoption of the final environmental document.

The Protocol establishes a process for assessing the reasonableness and feasibility of noise abatement. Before publication of the draft environmental document, a *preliminary noise abatement decision* is made. The preliminary noise abatement decision is based on the *feasibility* of evaluated abatement and the *preliminary reasonableness determination*. Noise abatement is considered to be acoustically feasible if it provides noise reduction of at least 5 dBA at receivers subject to noise impacts. Other non-acoustical factors relating to geometric standards (e.g., sight distances), safety, maintenance, and security can also affect feasibility.

The preliminary reasonableness determination is made by calculating an allowance that is considered to be a reasonable amount of money, per benefited residence, to spend on abatement. This *reasonable allowance* is then compared to the engineer's cost estimate for the abatement. If the engineer's cost estimate is less than the allowance, then the preliminary determination is that the abatement is reasonable. If the cost estimate is higher than the allowance, then the preliminary determination is that abatement is not reasonable.

The Noise Abatement Decision Report (NADR) presents the preliminary noise abatement decision based on acoustical and non-acoustical feasibility factors and the relationship between noise abatement allowances and the engineer's cost estimate. The NADR does not present the final decision regarding noise abatement; rather, it presents key information on abatement to be considered throughout the environmental review process, based on the best available information at the time the draft environmental document is published. The final overall reasonableness decision will take this information into account, along with other reasonableness factors identified during the environmental review process. These factors may include:

- Impacts of abatement construction;
- Public and local agency input;
- Life cycle of abatement measures;
- Views/opinions of impacted residents; and
- Social, economic, environmental, legal, and technological factors.

A Preliminary NADR was prepared following completion of the NSR (NADR, April 2010). Results of the Preliminary NADR revealed that all eight soundwalls identified in the NSR were acoustically feasible. A preliminary engineering cost estimate was prepared for each soundwall based on the heights and lengths determined from the NSR. The estimate considered all costs required to construct the proposed abatement measure, including the cost of the wall and wall footing, and allowances for traffic control, temporary construction easements, and retaining walls to accommodate the barrier. Ten percent mobilization and ten percent contingencies were also included in the cost estimate. Wall construction costs were based on masonry construction, in

accordance with Caltrans' standard specifications, and assumed cast-in-drilled-hole pile foundations and pile cap. Of the eight noise barriers considered, seven of them can be constructed within the allowable cost; therefore, they are considered reasonable. The cost to construct Soundwall S241 would exceed the reasonable allowance, but Caltrans and the Port decided to provide this soundwall to the affected residents.

Soundwall Voting

Following preparation of the NADR (April 2010; revised September 2010), the property owners of residences where the proposed soundwalls would be constructed were invited to attend the soundwall focus meeting held on May 12, 2010, to obtain information regarding the proposed soundwalls. All affected property owners were given an opportunity to vote for or against the proposed soundwall located next to their property line. Out of 71 ballots mailed to the affected property owners, 48 were returned with 34 "Yes" votes, 10 "No" votes, and 4 bad votes (either unchecked or checked both Yes and No), as summarized in Table 2.16-7.

**Table 2.16-7
Summary of Soundwall Voting Results**

Soundwall	Ballots Mailing		Voting Results			Remarks
	Ballots Mailed	Return Ballots	Yes	No	Bad Vote	
S24	21	15	12	1	2	The one with No vote is located in the middle of the soundwall.
S40	11	8	4	4	0	Out of the four No votes, three are for the houses on the east end of the soundwall and one in the middle of the soundwall.
S241	6	4	3	1	0	The one with No vote is located in the middle of the soundwall.
S247	11	8	5	3	0	Out of the three No votes, two are for the houses located at the end of each side of the soundwall and one in the middle of the soundwall.
S250	1	1	0	1	0	This soundwall is for one property, and the owner voted No for the soundwall.
S331	7	4	3	0	1	
S340	6	4	4	0	0	
S346	8	4	3	0	1	
Total	71	48	34	10	4	

Source: Noise Abatement Decision Report, Parsons, September 2010.

Based on the voting results, all proposed soundwalls will be considered for construction, with the exception of S250. Because Soundwall S250 is located entirely within private property, 100 percent concurrence would be required for the soundwall to be constructed. The single "No" vote

from the sole residence affected by the barrier implies that this soundwall will no longer be considered.

During the soundwall focus meeting, a few residents located at the end of Soundwalls S247 and S40 requested that the soundwalls not be constructed at their properties. In addition, one resident at the west end of Soundwall S24 requested that the wall be extended to provide traffic noise abatement at the outdoor use area of her property because her property is the only remaining house along the roadway section where Soundwall S24 would be constructed. To determine if shortening or extending the soundwall at various ends per residents' request would have any effect to noise abatement capability of the remaining portion of the soundwalls, a Traffic Noise Model was re-evaluated. Note that the request of the property owner whose residence is located in the middle of the proposed soundwalls to not have the wall constructed next to their property cannot be incorporated because the soundwall cannot be disconnected.

Results of the noise analysis revealed that Soundwalls S247 and S40 could be shortened without affecting the noise reduction ability of the wall now ending at the adjacent properties; therefore, the soundwalls at these locations would be shortened per the property owners' request. In addition, Soundwall S24 could be lengthened to provide noise abatement to the single remaining property located at the west end of the soundwall. The location of the modified soundwall based on the affected property owners' input is presented in Figure 2.16-4. It should be noted that the noise abatement decision presented in this environmental document is based on preliminary project alignments and profiles, which may be subject to change. As such, the physical characteristics of noise abatement described herein also may be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. A final decision to construct noise abatement will be made upon completion of the project design.

2.16.4.3 Indirect Impacts

No Build Alternative

No indirect impacts would occur under the No Build Alternative.

Build Alternative

Since the proposed soundwall would be incorporated as a component of the proposed project, impacts on various resources as a result of the proposed soundwall construction have been described in respective sections of this chapter.

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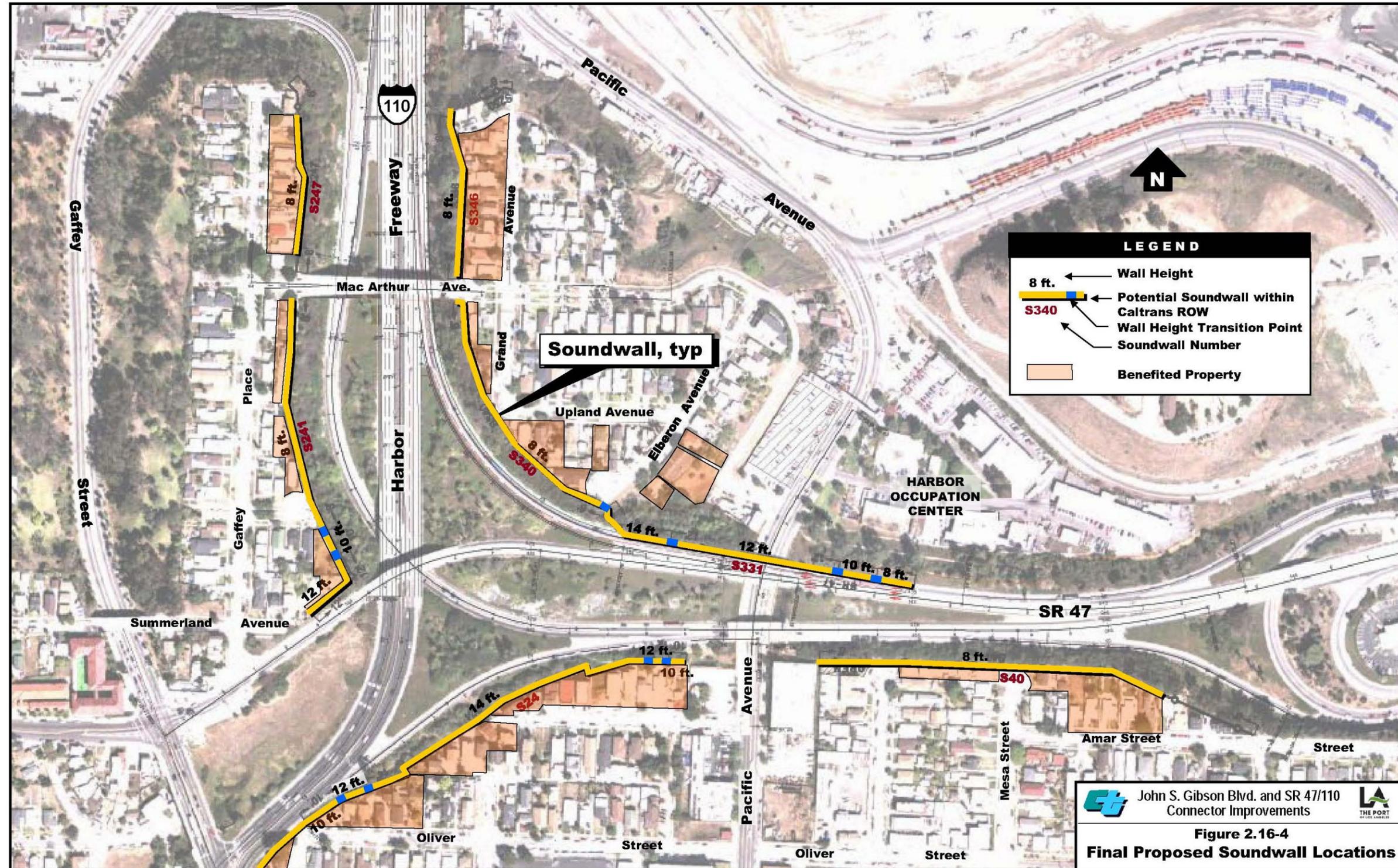


Figure 12.6-4 Final Proposed Soundwall Locations

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2.16.5 Avoidance, Minimization, and Mitigation Measures

2.16.5.1 No Build Alternative

Under the No Build Alternative the responsibility to abate the traffic noise impact would lie with the Metropolitan Transportation Authority (MTA). The required soundwalls would have to be programmed by the MTA for funding. Noise abatement will not be undertaken by the LAHD or Caltrans.

2.16.5.2 Build Alternative

Construction

MM Noise-1 Noise control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications and these special provisions.

The noise level from the contractor's operations, between the hours of 7:00 a.m. and 7:00 p.m., shall not exceed 86 dBA at a distance of 50 feet. Construction equipment shall not be operated, nor shall the engines of this equipment be allowed to run, between the hours of 7:00 p.m. and 7:00 a.m., or on Sundays, except that within the limits of the project and subject to control of the Engineer, equipment may be operated during the restricted hours to:

- Service traffic control facilities.
- Service construction equipment.
- Perform work that the contract specifies be done during restricted hours.
- Saw transverse weakened plane joints in concrete pavement.

Minor deviations from this section concerning hours of work that do not significantly change the cost of the work may be permitted upon written request of the contractor if, in the opinion of the engineer, the work will be expedited and sound levels resulting from this work will not cause adverse public reaction.

The requirements in this section shall not relieve the contractor from responsibility for complying with local ordinances regulating noise level outside the limits of the State ROW.

The noise level requirement specified herein shall apply to equipment on the job or related to the job including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings, except those required by safety laws for the protection of personnel.

Permanent

With the proposed soundwalls to abate future traffic noise described in this section of the report, no further avoidance, minimization, and mitigation measures would be required.



PART III - BIOLOGICAL ENVIRONMENT

This section discusses potential impacts to biological resources within the project area as a result of proposed project implementation. The information in this section is excerpted from the Natural Environment Study (NES) (Minimal Impacts [MI]) conducted for this project and approved by Caltrans in April 2009, and the supplemental technical memorandum completed in December 2009.

A terrestrial ecologist conducted a pedestrian survey of existing biological conditions on September 18, 2008. The survey was intended to assess the existing biological circumstances of the site, inventory the wildlife habitat and vegetation types, and evaluate the site's potential to support special-status plant and wildlife species within the survey area. The biological study area sufficient for the NES (MI) is largely studied in September 2006 by the same terrestrial ecologist and subsequently described in the Preliminary Environmental Assessment Report (PEAR) submitted to Caltrans as part of the Project Study Report (PSR) dated January 2007.

The terrestrial ecologist spent approximately 5 hours in mid-day observing all aspects of the biological study area from as many vantage points as possible. All shrubs and bushes with woody stems and all perennial plant species, whether native or introduced, were noted. General habitat conditions were noted. Locations of prominent trees were also recorded on April 2007 aerial photographs (i.e., natural color digital orthorectified images, 1-foot horizontal resolution; UTM Z11 NAD 1983; USGS, <http://seamless.usgs.gov/>). The California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDDB) was reviewed prior to the field survey to identify special-status plants, wildlife, and habitats known to occur in the vicinity of the survey area. Other sources used to analyze the impact of this project on biological resources include the U.S. Fish and Wildlife Service's (USFWS) *Federal Register*, the U.S. National Atlas, and the Draft Environmental Impact Statement/Environmental Impact Report for the Schuyler Heim Bridge Replacement and SR 47 Expressway Project.

The pedestrian survey area included the Channel Street Overhead, Pacific Avenue overcrossing, connector lanes that WB traffic on SR 47 follows to reach NB I-110, two access I-110 ramps to and from John S. Gibson Boulevard, and John S. Gibson Boulevard between Channel Street and the north side of the Port Authority building where City trees are planted and there are landscaped embankments and shoulders. Neither quantitative sampling (i.e., random or stratified random in design) nor an all-inclusive inventory of biotic species within the project study area were judged appropriate at this level of ecological characterization.

Subsequently, additional noise data gathered in two neighborhoods adjacent to the project have been analyzed. That analysis shows a need to construct four additional soundwalls, two at the top

of the embankment on the west side of I-110 and the other two on the south side of SR 47. Additional surveys were conducted on November 10 and December 3, 2009, at these locations by the same biologist who authored the NES (MI). No significant biological components from what was previously reported in the approved NES (MI) were found as a result of these additional surveys.

2.17 Natural Communities

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, fish passage, 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.

2.17.1 Affected Environment

The study area is mostly a developed area within the community of San Pedro composed of roadway and rail links to the Port, residential neighborhoods, commercial enterprises, local surface streets, and freeways with their margins of landscaped ROW. The project study area is commercial and residential in character; no remnants of any native ecological communities remain anywhere near the interchange. The combined influence of freeway, its access ramps, paved surfaces with commercial buildings surrounded by parking lots, and residential housing backing up directly to the ROW fence where SR 47 curves around to join I-110 dictate the biotic character of the biological study area. Although decorative trees and other non-native urban landscaping elements are present, along with patches of invasive weeds, no natural ecological communities/vegetation types are present within the project area. There are no designated critical habitats essential to the life history of any listed species at the site or anywhere within the immediate vicinity.

2.17.2 Environmental Consequences

No construction, permanent, or cumulative impacts to natural communities would occur under the No Build or Build Alternatives.

2.17.3 Avoidance, Minimization, and Mitigation Measures

No avoidance, minimization, or compensation measures are required.

2.18 Wetlands and Other Waters

2.18.1 Regulatory Setting

Wetlands and other waters are protected under many laws and regulations. At the federal level, the CWA (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (i.e., water-loving) vegetation, wetland hydrology, and hydric soils (i.e., soils subject to 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 no discharge of dredged or fill material can 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 USACE with oversight by EPA.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as FHWA, 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.

At the state level, wetlands and waters are regulated primarily by CDFG and the RWQCBs. In certain circumstances, the Coastal Commission may also be involved. Sections 1600-1607 of the 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 CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, then a Lake or Streambed Alteration Agreement will be required. CDFG 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 USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFG.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section

401 of the CWA. Please see Section 2.11, Water Quality and Stormwater Runoff, for additional details.

2.18.2 Affected Environment

No wetlands, streams or creeks, lakes or ponds, or riparian communities occur in the biological study area. USGS topographic maps show the area as without permanent or ephemeral water courses (i.e., no ‘blueline’ features).

2.18.3 Environmental Consequences

No wetlands, streams or creeks, lakes or ponds, or riparian communities are present within the project study area; therefore, no construction, permanent, or cumulative impacts would occur under the No Build or Build Alternatives.

2.18.4 Avoidance, Minimization, and Mitigation Measures

No avoidance, minimization, or compensation measures are required.

2.19 Plant Species

2.19.1 Regulatory Setting

The USFWS and CDFG share 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 afforded 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). See Section 2.21, Threatened and Endangered Species, for detailed information regarding these species.

The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, *et seq.* Department projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and CEQA, PRC, Sections 2100-21177.

2.19.2 Affected Environment

Development has fostered reliance on urban landscaping for hardiness and ease of maintenance within the ROW, along roads, and adjacent to I-110. The combined influence of freeway, its

access ramps, paved surfaces with commercial buildings surrounded by parking lots, and residential housing backing up directly to the ROW fence where SR 47 curves around to join I-110 dictate the biotic character of the biological study area. Nowhere in the biological study area does a plant community native to this maritime part of the Los Angeles basin remain. No native trees or shrubs of any species were found as solitary individuals.

Within the project area, the non-native vegetation includes both ‘California’ and Brazilian pepper trees (*Schinus molle* and *S. terebinthifolius*), several non-native pines (probably Canary Island Pine, *Pinus canariensis*), gum trees (*Eucalyptus* sp.), silk oak (*Grevillea robusta*), several date palms (*Phoenix* sp.), and a tree closely resembling Queensland pittosporum (*Pittosporum rhombifolium*). A large, solitary olive tree (*Olea europaea*) grows at the top of the embankment closer to the Pacific Avenue overcrossing than I-110. Iceplant (*Carprobrodus edulis*) was planted extensively on the embankment from Pacific Avenue to north of the MacArthur Avenue overcrossing. Most recently, jacaranda (*Jacaranda mimosifolia*), an ornamental magnolia (*Magnolia* sp.), and myoporum (*Myoporum laetum*) were planted. Cape honeysuckle (*Tecomaria capensis*) is coming up in many places inside the iceplant carpet. Gum trees and an arborescent species of acacia (*Acacia* sp.) were planted and are still maintained around the south end of the Channel Street Overhead. Two species of gum trees and nothing else of any significant size were planted within the ROW where the access ramps depart from and lead back to I-110. Scattered horseweed (*Conyza canadensis*), which is an opportunistic composite that thrives in disturbed ground, has come up at many locations along the access ramps. Tumbleweeds (*Salsola tragus*) form small clumps, and white nightshade (*Solanum americanum*) has a foothold as scattered individuals at places inside the ROW adjacent to the access ramps. Castor bean (*Ricinus communis*) is established inside the NB on-ramp connector to I-110 and closer to the fence than the connector itself, where periodic ROW maintenance need not tend to sight lines adjacent to the freeway.

Aside from a few annual weedy species, nothing that was deliberately planted grows along John S. Gibson Boulevard. An ornamental fig, very likely the rusty-leafed (*Ficus rubiginosa*), has been planted as a street tree. In a few places, date palms (*Phoenix* sp.) were planted in the median.

2.19.3 Environmental Consequences

No Build Alternative

No construction, permanent, or cumulative impacts to plant species would occur under the No Build Alternative.

Build Alternative

No native plant species are present within the project APE; therefore, no construction, permanent, or cumulative impacts would occur with implementation of the Build Alternative. See Section 2.20.3, Environmental Consequences, Animal Species, for information regarding the potential impact of non-native tree removal on birds protected by the Migratory Bird Treaty Act (MBTA).

2.19.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No mitigation is required.

Build Alternative

No additional avoidance, minimization, or mitigation measures are required under the Build Alternative. See Section 2.20.3, Avoidance, Minimization, and Mitigation Measures, to ensure that tree removal is in compliance with the conservation measures written into the MBTA.

2.20 Animal Species

2.20.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries, and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the CESA or FESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.21.2. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

2.20.2 Affected Environment

As previously discussed, there is an absence of native biological communities within the study area that limits its suitability to most animal species, largely excluding all except those able to accommodate to urban settings. Feral pigeons (*Columbia livia*) are abundant, and house sparrows (*Passer domesticus*) are common, particularly around the Channel Street Overhead and the commercial blocks just west of it. Mourning doves (*Zenaida macroura*), house finches (*Carpodacus mexicanus*), European starlings (*Sturnus vulgaris*), and an occasional spotted dove (*Streptopelia chinensis*) were seen in the trees and large shrubs planted in the residential neighborhoods on both sides of I-110. Tracks of raccoons (*Procyon lotor*) were found in soft dirt along the railroad tracks beneath the Channel Street Overhead. No mud nests built by barn swallows (*Hirundo rustica*) or cliff swallows (*Petrochelidon pyrrhonota*) adhere to any soffit or vertical face on either overcrossing structure. Mud stains commonly left on concrete surfaces after such mud nests have fallen away were not found. No swallows were seen on the wing hanging around the openings to weepholes in the Channel Street Overhead soffits or anywhere in the biological study area. Any species that might have been noted in July had already departed for winter migratory destinations by the time the biological study area was reconnoitered.

The undersides of both overcrossings were examined closely for niches and structural features where bats could roost. The Pacific Avenue overcrossing has no such features; however, the Channel Street Overhead does. It was evident that some type of animal uses the thin space at the very top of the vertical pillars, as evidenced by whitewash streaking the uppermost few feet. Due to the small size of the gaps (based on a visual estimation), bats are the only animal likely to utilize the space. A careful search for bat droppings included the area under and around the Channel Street Overhead. Bat scat was not found anywhere on the ground; none could be seen adhering to the surface of the pillars themselves; however, the whitewash, located in a place inaccessible to anything other than a bird or volant mammal, indicates that something uses these gaps for at least part of the year.

The summer range of six bat species extends into this part of the Los Angeles basin (England, 2003), and by quirk of species-specific behavioral preferences, sometimes they will occupy the gaps, such as deep crannies, narrow ledges, and dark seams, in bridges (Caltrans, 2007). The six species are: pallid bat (*Antrozous pallidus*), western mastif bat (*Eumops perotis*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumaensis*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), and big free-tailed bat (*Nyctinomops macrotis*). Except for the pocketed free-tailed bats observed near Machado Lake, which is more than 2 miles northwest of the project area, CNDDDB records indicate that none of the other five species have been reported closer than 5 miles from the biological study area.

2.20.3 Environmental Consequences

No Build Alternative

No construction impacts to animal species would occur under this alternative.

Build Alternative

Construction Impacts

Trees affording possible nest sites to birds protected by the MBTA are located adjacent to the Pacific Avenue Bridge and at both ends of the Channel Street Overhead and at the top of the slope above the connector, along the alignment for a proposed soundwall. No nests of songbirds or raptors were seen in any of these tree canopies during the study. No trees or shrubs large enough that birds would consider them as nest sites grow along the shoulder of the connector linking SR 47 to I-110, nor where off- and on-ramps join I-110 to John S. Gibson Boulevard.

Where construction requirements necessitate removing trees, preparatory clearing and grubbing should be accomplished during the non-nesting season (September 1 to February 15) when any migratory bird species using the project area have fledged all chicks or have departed for winter ranges. With this provision written into construction contract documents, project construction would thus not violate conservation measures written into the MBTA.

Should tree removal during the nesting season (i.e., late February through August) be unavoidable, a qualified biologist would need to conduct a contemporary survey for nesting birds. On discovery of any species included within provisions of the MBTA and nesting in the project area, a buffer 500 feet in radius around the nest would be declared and construction postponed within the vicinity until a subsequent check shows that the nest has either failed or the young have fledged. Such a conservation measure would also satisfy requirements of the MBTA.

Based on the observation of whitewash streaking the uppermost few feet of the vertical pillars of the Channel Street Overhead, it is expected that a bird or volant mammal uses these gaps at the top of the pillars for at least part of the year. Based on the small size of the gap, it is likely that they are utilized by bats. Covering weepholes and filling in gaps after any bats have left the bridge would prevent them from roosting in these locations.

Permanent Impacts

The biota, migratory birds, and undetermined bat species that live within the area of potential effect for biological resource study can be just as successful biologically two blocks away where equivalent non-native conditions (i.e., landscape trees and crevices in man-made structures) exist. The non-native trees and structural gaps afforded within this area of potential effect for biological resource study do not provide any intrinsically biological value to the species that utilize them. The removal or alteration of any of these features would therefore have no

permanent impact on the animal species that might utilize them for part of the year, given that removal or alteration of these features would occur outside of nesting seasons.

2.20.4 Avoidance, Minimization, and Mitigation Measures

No Build Alternative

No avoidance, minimization, or mitigation measures are required.

Build Alternative

Construction

MM BIO-1 Clearance of vegetation at the top of the slope above the I-110 connector, and any land adjacent to the ends of the Channel Street Overhead, shall be conducted during the non-nesting season (between September 1 to February 15) to preclude direct effects on any migratory nesting bird species that might be in the project area.

MM BIO-2 The thin structural gaps at the top of each support pillar beneath the Channel Street Overhead shall be filled with any convenient, suitable material. Fiberglass batting or old gunny sacks would suffice. Filling these gaps when bats have departed, which is between mid-September and early February, would prevent bats from roosting in these locations and, therefore, from being more susceptible to adverse construction disturbance.

MM BIO-3 Coarse mesh cover shall be fitted over the weepholes through the Channel Street Overhead soffits at the same time to prevent any bats from gaining entrance to the interior of the box and thus being subject to disturbance if overcrossing construction occurs during the summer months.

Permanent

No avoidance, minimization, and mitigation measures are required.

2.21 Threatened and Endangered Species

2.21.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the FESA: 16 U.S.C., Section 1531, *et seq.* See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA, are required to consult

with USFWS and NOAA Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the CESA, California Fish and Game Code, Section 2050, *et seq.* CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.21.2 Affected Environment

During the reconnaissance-level ecological study, no native habitats, vegetation types, or special-status species were observed. There was also little scientific or historical evidence found that would indicate that any threatened or endangered species inhabit the study area.

An inquiry was conducted on records kept by the CNDDDB regarding all formerly listed species, those species considered to be in decline in at least part of their historical range but not yet listed, and natural ecological communities of regional importance. Accounting for the varying levels of ambiguity in the reported location of regional species, the approximate geographical locations of the regional threatened and endangered species were mapped. Six species were mapped within 1-mile of the biological study area. Table 2.21-1 lists all of these species that could potentially inhabit the project area.

No special-status plants or animals were observed within or immediately adjacent to the project area during the ecological study. The records kept by the CNDDDB indicate that four of the special-status species have not been seen in the area for more than a century, including Lyon’s pentachaeta, Pacific saltscale, Davidson’s salt scale, and the estuary seablite. The coastal

California gnatcatcher (*Polioptila californica californica*) has been accorded formal status per authority of the CESA, although the species has been designated as threatened by the FESA. Critical habitat for this species has been designated for its recovery in an intricate pattern of coastal sage scrub amid residential development on the Palos Verdes Peninsula. The project area is 1.25 miles east of the nearest salient of that critical habitat. The closest Southern tarplant has been observed more than 1-mile away at the Naval Reservation northwest of the project area.

**Table 2.21-1
Listed Species Possibly within 1-Mile of the Project Area**

Species	Plant/ Animal	Status	Ecological Preference
Lyon's pentachaeta (<i>Pentachaeta lyonii</i>)	Plant	endangered (Federal and State)	Ecotone between native grasslands and chaparral
coastal California gnatcatcher (<i>Polioptila californica californica</i>)	Animal	threatened (Federal), none (State)	Coastal sage scrub
south coast, or Pacific, saltscale (<i>Atriplex pacifica</i>)	Plant	Populations in restricted areas of all four species are declining, but not enough to warrant formal listing.	Alkaline soils of coastal scrub and bluffs, chenopod scrub
Davidson's saltscale (<i>Atriplex seranana davidsonii</i>)	Plant	Populations in restricted areas of all four species are declining, but not enough to warrant formal listing.	Alkaline soils of coastal bluffs
Southern tarplant (<i>Centromadia parryi australis</i>)	Plant	Populations in restricted areas of all four species are declining, but not enough to warrant formal listing.	Ecotone between freshwater marshes and grasslands
estuary seablite (<i>Suaeda esteroa</i>)	Plant	Populations in restricted areas of all four species are declining, but not enough to warrant formal listing.	Coastal saltmarsh

Source: CNDDDB, 2003.

2.21.3 Environmental Consequences

No Build Alternative

No construction, permanent, or cumulative impacts to threatened or endangered species would occur under this alternative.

Build Alternative

No designated critical habitats for threatened or endangered species occur within the biological resources study area; therefore, no construction, permanent, or cumulative impacts would occur with implementation of the Build Alternative.

2.21.4 Avoidance, Minimization, and Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.22 Invasive Species

2.22.1 Regulatory Setting

On February 3, 1999, President Clinton signed 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.” FHWA guidance issued August 10, 1999, directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

2.22.2 Affected Environment

The State of California issued a compendium for alien plant species, and they are ranked roughly by their proclivity to spread aggressively through natural communities within the state. Two species from this list widely regarded as invasive pests occur within the project study area. Iceplant (*Carpobrotus edulis*) and Brazilian pepper tree (*Schinus terebinthefolius*) are both horticultural varieties planted deliberately on the shoulders of the freeway, and they are included on the list of most invasive wildland pest plants. None of the species on the California list of noxious weeds is currently used for erosion control or landscaping purposes within the project area.

2.22.3 Environmental Consequences

Given that proper precautions are taken during construction activities to prevent the propagation of invasive species within or outside the project area, there would be no permanent impacts with implementation of the Build Alternative.

2.22.4 Avoidance, Minimization, and Mitigation Measures

Construction

MM BIO-4 In compliance with the Executive Order on Invasive Species, EO 13112, the landscaping and erosion control included in the project will not use species listed as noxious weeds.

MM BIO-5 Precautions shall be taken to prevent the propagation of invasive species found in or adjacent to the construction areas. These include inspection and cleaning of construction equipment and eradication strategies.

Permanent

No avoidance, minimization, or mitigation measures are required.



2.23 Climate Change (Per CEQA Requirement)

2.23.1 Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, NO_x, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by Environmental Protection Agency in December 2007 and efforts to overturn the decision had been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. On January 26, 2009, it was announced that EPA would reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve real, quantifiable, cost-effective reductions of greenhouse gases. " Executive

Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

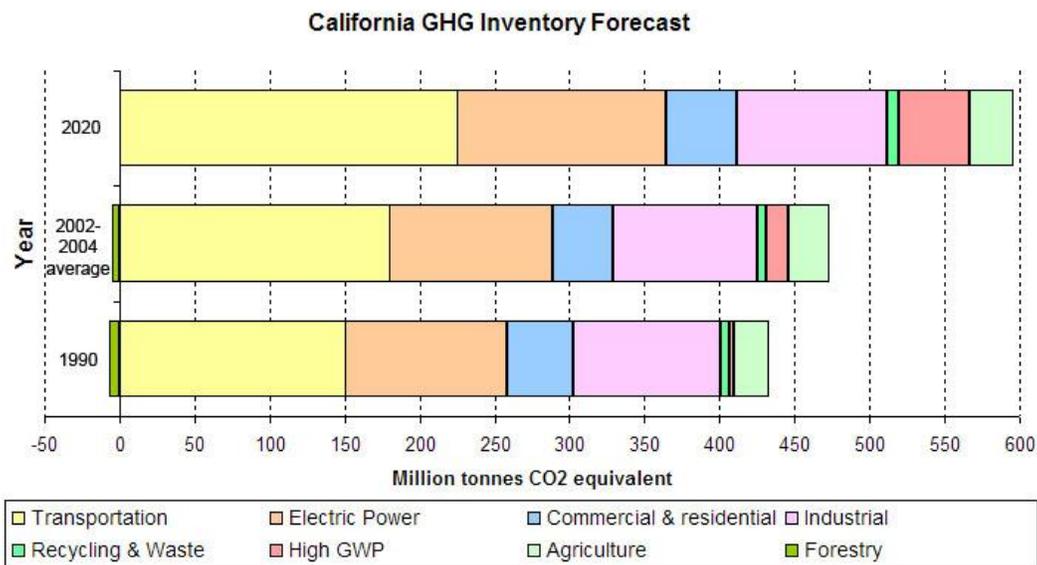
- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.³

³ <http://www.epa.gov/climatechange/endangerment.html>

According to *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), 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 participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(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 in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.



Source : <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

**Figure 2.23-1
California Greenhouse Gas Inventory**

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all

human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>

2.23.2 Environmental Consequences

2.23.2.1 GHG Emission Analysis

The project GHG emissions in the opening year (2014) and horizon year (2035) are compared with two baselines, as follows:

- The changes in CO₂e emissions along the project corridor, compared with the CEQA baseline (i.e., emissions during the year 2009)
- The changes in CO₂e emissions along the project corridor compared with the no-build scenario

These comparisons provide disclosure of changes in project emissions of GHGs. Note that the GHG emissions for the existing year 2009 with and without project were also calculated and there were no distinguished difference in the results (Air Quality Technical Study, Revised March 2011).

The proposed project is a transportation facility; therefore, the GHG emissions would only include the direct GHG emissions that would be generated by the construction and operational activities of the project. Sources of GHG emissions are the same as those analyzed for criteria pollutant emissions and include (1) project-related construction sources, including off-road construction equipment exhaust emissions, and emissions from on-road haul trucks and workers commute vehicles; and (2) GHG emissions from vehicles traveling along the project corridor.

Project-related GHG emissions (No Build and Build Alternatives) were calculated using the emission factors for off-road and on-road mobile sources, annual VMTs along the project roadways, and guidelines of the California Climate Action Registry (CCAR) Protocol and the *Technical Advisory*, prepared by the Governor's Office of Planning and Research.

Climate change, as it relates to man-made GHG emissions, is by nature a global and cumulative impact. According to the Association of Environmental Professionals (AEP), in its paper titled *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*, "an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases." The following GHG emissions estimate is presented for the purpose of disclosing all project-related emissions.

Construction Emissions

GHG emissions from construction of the project are presented in Table 2.23-1.

**Table 2.23-1
Estimate of GHG Emissions from Project Construction**

Construction Year	CO ₂ (lbs/day)	CH ₄ (lbs/day)	CO ₂ e (lbs/day)	CO ₂ e (Metric Tons/Year)
Year 1 – 3 months				
Onsite ^a	7,547	1	7,564	210
Offsite ^b	5,556	<1	5,559	165
Total	13,103	1	13,123	375
Year 2 – 12 months				
Onsite ^a	7,509	1	7,523	711
Offsite ^b	7,645	<1	7,650	745
Total	15,154	1	15,173	1,456
Year 3 – 12 months				
Onsite ^a	7,748	1	7,761	481
Offsite ^b	7,676	<1	7,680	646
Total	15,424	1	15,441	1,127
^a Compiled using the CEQA Air Quality Handbook and the emissions inventory from OFFROAD model. The equipment mix and use assumption for each phase is provided by the construction engineer, a list of which is included in Appendix A. ^b Offsite emissions include on-road vehicles emissions associated with construction equipment transport to the site, workers' commute, and material hauling activities. EMFAC2007 model was used for emission factors.				

Source: Air Quality Technical Report, Parsons 2010.

Operational Emissions.

Table 2.23-2 summarizes the annual operational GHG emissions that would occur within the project region (i.e., California) from the proposed project during opening year 2014 and horizon year 2035. Sources considered in these emission calculations are the same as those analyzed for criteria pollutants. As Table 2.23-2 shows in each analyzed case (existing and future years, with or without proposed project), CO₂ is the primary GHG of concern because vehicle operation (i.e., on-road or off-road) does not result in appreciable amounts of other GHGs.

Comparison with CEQA Baseline (Year 2009 Emissions).

The data in Table 2.23-2 show that in each analyzed future year, annual operational CO₂e emissions would increase relative to the CEQA baseline. The estimated GHG emissions increase from 2009 emissions is 3,421 metric tons CO₂e per year (MTCO₂e/yr) and 6,886 MTCO₂e/yr during 2014 and 2035, respectively.

Comparison with No Project (NEPA Baseline).

Table 2.18-2 shows that during the future years, from opening year 2014 through the horizon year 2035, there would be a small decrease in project GHG emissions compared to the NEPA baseline (no-action) because the project would improve traffic movement and safety and, as previously discussed, it would not increase capacity, fleet mix, or traffic patterns.

**Table 2.23-2
Annual GHG Emissions Associated with Proposed Project**

Project Scenario/ Roadway Segments	Emissions (Metric Tons per Year)		
	CO ₂	CH ₄	CO ₂ e
Existing Year 2009			
SB SR 47 East of Harbor Boulevard On-Ramp	1,129	0.06	1,130
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	240	0.01	241
SB SR 47 to NB I-110 Connector	960	0.05	961
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	87	0.01	87
NB I-110 Off-Ramp to John S. Gibson Boulevard	35	0.00	35
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	2,434	0.15	2,437
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	633	0.04	634
NB I-110 North of John S. Gibson Boulevard On-Ramp	5,762	0.35	5,769
Total Year 2009	11,280	0.67	11,294
Year 2014 – No Build			
SB SR 47 East of Harbor Boulevard On-Ramp	1,472	0.04	1,473
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	316	0.01	316
SB SR 47 to NB I-110 Connector	1,512	0.05	1,513
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	107	0.00	107
NB I-110 Off-Ramp to John S. Gibson Boulevard	57	0.00	57
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	2,919	0.10	2,922
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	961	0.03	962
NB I-110 North of John S. Gibson Boulevard On-Ramp	7,405	0.25	7,410
Total Year 2014 – No Build	14,751	0.48	14,761
Year 2014 – Build Alternative (Opening Year)			
SB SR 47 East of Harbor Boulevard On-Ramp	1,472	0.04	1,473
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	310	0.01	310
SB SR 47 to NB I-110 Connector	1,484	0.04	1,485
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	107	0.00	107
NB I-110 Off-Ramp to John S. Gibson Boulevard	57	0.00	57
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	2,919	0.10	2,922
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	951	0.03	952
NB I-110 North of John S. Gibson Boulevard On-Ramp	7,405	0.25	7,410
Total Year 2014 – Proposed Project	14,705	0.48	14,715
Net Change from Existing Year 2008	3,425	-0.19	3,421
Net Change from No-Build Scenario	-45	0.00	-45

**Table 2.23-2
Annual GHG Emissions Associated with Proposed Project**

Project Scenario/ Roadway Segments	Emissions (Metric Tons per Year)		
	CO ₂	CH ₄	CO ₂ e
Horizon Year 2035 – No Build			
SB SR 47 East of Harbor Boulevard On-Ramp	1,641	0.01	1,641
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	391	0.00	382
SB SR 47 to NB I-110 Connector	2,062	0.02	2,063
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	135	0.00	135
NB I-110 Off-Ramp to John S. Gibson Boulevard	74	0.00	74
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	3,639	0.04	3,640
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	1,211	0.01	1,212
NB I-110 North of John S. Gibson Boulevard On-Ramp	9,080	0.09	9,082
Total Year 2035 – No Build	18,234	0.19	18,238
Horizon Year 2035 – Build			
SB SR 47 East of Harbor Boulevard On-Ramp	1,641	0.01	1,641
SR 47 SB Weaving from Harbor Boulevard On-Ramp to I-110 Connector	382	0.00	382
SB SR 47 to NB I-110 Connector	2,015	0.02	2,015
I-110 NB Weaving Segment from SR 47 Connector to John S. Gibson Boulevard Off-Ramp	133	0.00	133
NB I-110 Off-Ramp to John S. Gibson Boulevard	73	0.00	73
NB I-110 between John S. Gibson Boulevard Off- and On-Ramps	3,639	0.04	3,640
NB John S. Gibson Boulevard On-Ramp to I-110 (merge)	1,199	0.01	1,199
NB I-110 North of John S. Gibson Boulevard On-Ramp	9,080	0.09	9,082
Total Year 2035 – Build	18,161	0.18	18,164
Net Change from Existing Year 2008	6,881	-0.49	6,870
Net Change from No-Build Scenario	-73	-0.01	-73
One metric ton equals 2,204.6 pounds			
<i>CO₂e = carbon dioxide equivalent of combined emissions of all GHGs. The CO₂-equivalent emission of each GHG is the emission rate multiplied by its corresponding global warming potential (GWP). The GWP for CH₄ is 21.</i>			

Source: Air Quality Technical Report, Parsons 2010.

It should be noted that while the CO₂ emissions factor does assume certain reductions in vehicle emissions due to future vehicle models operating more efficiently, the factor does not take into account additional reductions in vehicle emissions that would take place in response to AB 1493, when mobile source emission reductions are ultimately implemented through legislation.

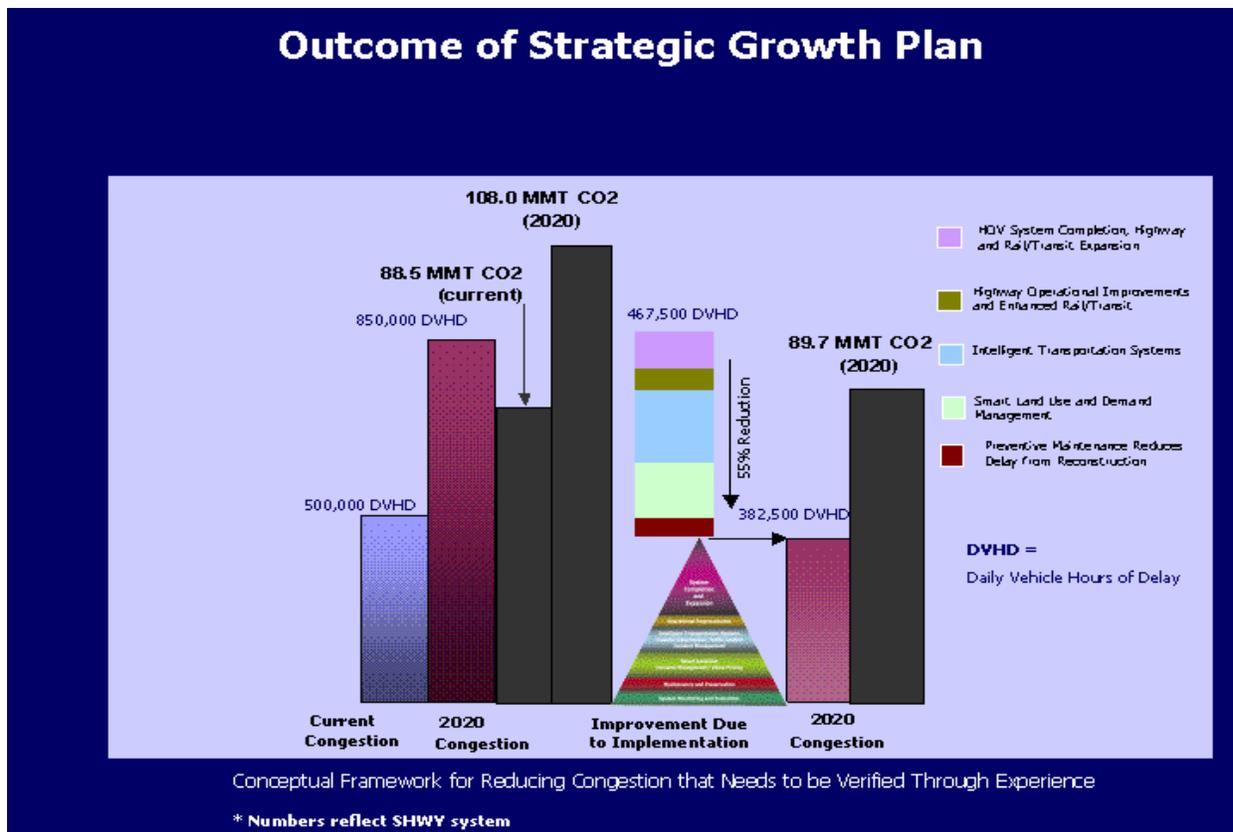
2.23.2.2 AB 32 Compliance

Caltrans continues to be actively involved on the Governor’s Climate Action Team as CARB works to implement the Governor’s Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies that Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Schwarzenegger’s Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify

the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding through 2016.⁴ As shown in Figure 2.23-2, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that when combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), Caltrans is supporting efforts to reduce VMT by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars and light- and heavy-duty trucks; Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that control of the fuel economy standards is held by EPA and CARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at UC Davis.

⁴ Governor's Strategic Growth Plan, Fig. 1 (<http://gov.ca.gov/pdf/gov/CSGP.pdf>)



**Figure 2.23-2
Outcome of Strategic Growth Plan**

Table 2.23-3 summarizes the Department and statewide efforts that Caltrans is implementing to reduce GHG emissions. For more detailed information about each strategy, see Climate Action Program at Caltrans (December 2006), available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

To the extent that it is applicable or feasible for the project and through coordination with the Project Development Team, the following measures will also be included in the project to reduce GHG emissions and potential climate change impacts from the project:

Caltrans and the CHP are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

**Table 2.23-3
Climate Change Strategies**

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & ITS Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	CalEPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.67

Landscaping reduces surface warming and, through photosynthesis, decreases CO₂. The project proposes planting in the intersection slopes, drainage channels, and seeding in areas adjacent to frontage roads and planting a variety of different-sized plant material and scattered skyline trees where appropriate, but not to obstruct the view of the mountains. Caltrans has committed to planting a minimum of 40 trees. These trees will help offset any potential CO₂ emissions increase. Based on a formula from the Canadian Tree Foundation⁵, it is anticipated that the planted trees will offset between 7 and 10 tons of CO₂ per year.

According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to 10 minutes in each direction; in addition, the contractor must comply with SCAQMD's rules, ordinances, and regulations in regards to air quality restrictions.

2.23.2.3 Adaptation Strategies

Addressing climate change requires a two-pronged approach: mitigation and adaptation. The previous discussion addressed the primary cause of climate change, GHG, and the state's efforts to reduce these emissions. It covered the executive orders and legislation, strategies to reduce and mitigate the effects of these emissions, and analytical methods to analyze GHG for environmental documents. This section discusses climate change –adaptation strategies,” which is 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.

Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increased storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and, in extreme cases, may require a facility to be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaption must also involve the natural environment. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed EO S-13-08, which directed many state agencies to address California's vulnerability to sea level rise caused by climate change.

⁵ Canadian Tree Foundation at http://www.tcf-fca.ca/publications/pdf/english_reduceco2.pdf. For rural areas, the formula is: # of trees/360 x survival rate = tons of carbon/year removed for each of 80 years.

The California Resources Agency (now the Natural Resources Agency [Resources Agency]), through the interagency Climate Action Team, was directed to coordinate with local, regional, state, and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts, and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, the Resources Agency was directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- The range of uncertainty in selected sea level rise projections;
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (e.g., roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and
- A discussion of future research needs regarding sea level rise for California.

Furthermore EO S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess the vulnerability of transportation systems to sea level rise affecting safety, maintenance, and operational improvements of the system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise; however, all projects that have filed a Notice of Preparation (NOP), and/or are programmed for construction funding the next 5 years (through 2013), or are routine maintenance projects as of the date of EO S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high-water levels, storm surge, and storm wave data. (EO S-13-08 allows some exceptions to this planning requirement.)

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; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted as part of Governor's Schwarzenegger's Executive Order on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on *Sea Level Rise Assessment*, which is due to be released by December 2010. Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects; however, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted to protect the transportation system from sea level rise.



2.24 Cumulative Impacts

2.24.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this 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 types of 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.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted 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 NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

2.24.2 Methodology

The cumulative impacts analysis for the proposed project was undertaken by following the eight-step process as set forth in the Caltrans Standard Environmental Reference (SER) and the FHWA *Interim Guidance: Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process (2003)*. The eight-step process is as follows:

- Identify resources to be analyzed
- Define the study area for each resources
- Describe the current health and historical context for each resources
- Identify direct and indirect impacts of the proposed project
- Identify other reasonable foreseeable actions that affect each resource

- Assess potential cumulative impacts
- Report results
- Assess the need for mitigation

As specified in Caltrans/FHWA 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. This cumulative impact analysis includes resources that are substantially impacted by the proposed project and resources that are currently in poor or declining health, or at risk even if project impacts would not be substantial.

2.24.3 Affected Environment

The proposed project site is located on the northeast side of the community of San Pedro within the City of Los Angeles at the Harbor Freeway, I-110/SR 47 interchange, and northwest of the Port of Los Angeles (Port or POLA) West Basin, which currently houses several active container terminals, including Yang Ming, China Shipping, Omni, and TraPac.

The I-110 access ramps at John S. Gibson Boulevard are located in front of the Gibson Gate driveway of the Port. At the John S. Gibson Boulevard exit, a single-lane NB I-110 off-ramp turns onto John S. Gibson Boulevard in front of the Gibson Gate. At the same location, a short 2-lane on-ramp merges to NB I-110. Numerous railroad tracks are located behind the Gibson Gate. South of the John S. Gibson Boulevard/I-110 access ramps, traffic from WB SR 47 merges to NB I-110 via a single-lane connector.

Land uses within the project study area are a mix of transportation facilities, industrial, commercial port, and residential neighborhoods. The area to the north of the project site is composed primarily of industrial uses serving the POLA, which is located east of the project site. Residential neighborhoods are located adjacent to the SR 47 and I-110 connector south of the project site. Commercial and residential uses are found on the west side of I-110.

No significant biological resources exist within the project site.

2.24.4 Recent Past, Present, and Foreseeable Projects Contributing to Cumulative Effects

Several projects are known to be proposed, approved, or under implementation within the immediate project area and nearby vicinity. In identifying recent past, present, and future projects, the baseline year 2009 is used to be consistent with the traffic study for this project, which was prepared using year 2009 as a baseline year. Based on this assumption, the projects

that have been approved prior to 2009 are considered a part of the existing setting (for traffic analysis purposes).

2.24.4.1 Roadway Improvement Projects

Several roadway improvement projects are being planned within the vicinity of the proposed projects, as described below:

West Basin Roadway Improvement: In an effort to improve the mobility of port-related traffic in and around the West Basin terminals, the Port commissioned the *Project Definition Report for West Basin Roadway Improvements* (Parsons 2005). The conceptual planning efforts focused on developing possible alternatives to the existing freeway interchanges at C Street, John S. Gibson Boulevard, and Harbor Boulevard. Following completion of the Project Definition Report, in addition to this project, the Port decided to move forward with the C Street Access Ramps Improvements Project (EA 26480K). The C Street Access Ramps Improvements Project is located less than 1-mile north along I-110 from the John S. Gibson Boulevard/I-110 Access Ramp. The C Street/Figueroa Street interchange would be redesigned to include an elevated ramp from Harry Bridges Boulevard to I-110, over John S. Gibson Boulevard. An additional extension would connect from Figueroa Street to the new elevated ramp, over Harry Bridges Boulevard. The project is currently (2009) under environmental review and is scheduled to be finished approximately 5 years after the environmental review process is completed.

Other Nearby Roadway Improvements: In addition to the C Street project, the following roadway improvement projects are planned for construction in the vicinity: EA 12995 LA47 0/1.9 (Install CCTV), EA 17990 LA47 0/0.9 (Upgrade Planting and Irrigation), and EA 22800 (LA110 0/0 gore area upgrade).

South Wilmington Grade Separation, Port of Los Angeles: An elevated grade separation would be constructed along a portion of Fries Avenue or Marine Avenue, over the existing rail line tracks, to eliminate vehicular traffic delays that would otherwise be caused by trains using the existing rail line and the new intermodal container transfer facility (ICTF) rail yard. The elevated grade would include a connection onto Water Street. There would be a minimum 24.5-foot clearance for rail cars traveling under the grade separation. The project is in the conceptual planning stage. Caltrans approval was obtained on the PSR. Current planning indicates completion in summer 2011.

Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway: This is an Alameda Corridor Transportation Authority (ACTA)/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR 47/Henry Ford Avenue/Alameda Street

transportation corridor by constructing an elevated expressway from the Schuyler Heim Bridge to SR 1 (Pacific Coast Highway). Construction is scheduled to begin in 2010/ 2011.

Gerald Desmond Replacement Bridge: This Port of Long Beach project would construct a new bridge across the Back Channel and associated roadway connectors, demolish the existing Gerald Desmond Bridge, and relocate the Southern California Electric transmission lines crossing the Cerritos Channel north of the bridge. Construction is scheduled to begin in 2011 and complete in 2015.

2.24.4.2 Port-wide Development Projects

Many Port-related projects are undergoing planning or construction within the POLA planning area. All of these projects would undergo an environmental review process prior to implementation. Among these proposed projects, the San Pedro Waterfront Project, China Shipping Project, and TraPac Project are considered relevant to the proposed John S. Gibson Boulevard/I-110 Access Ramp Improvement Project based on its nature of development.

San Pedro Waterfront Project: The proposed San Pedro Waterfront Project is a 5- to 7-year plan to develop along the west side of the Main Channel from the Vincent Thomas Bridge to the 22nd Street Landing Area Parcel up to and including Crescent Avenue. Key components include construction of a North Harbor Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Water Feature, enhancements to the existing John S. Gibson Park, construction of a Town Square at the foot of 6th Street, construction of a 7th Street Pier, construction of a Ports O' Call Promenade, development of the California Coastal Trail along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Display, relocation of the Catalina Cruises Terminal and the SS Lane Victory, extension of the Waterfront Red Car Line, and related parking improvements. The San Pedro Waterfront Project Environmental Impact Report was certified and approved on September 29, 2009.

China Shipping Project: The China Shipping Project is a new container terminal for the China Shipping Lines at Berths 97-109 in the Port of Los Angeles. Key elements of the project include new wharves; dredging; backlands development; terminal buildings; improvements to the terminal entrance; two bridges connecting Berths 97-109 with Berths 121-131; and relocation of the Catalina Express terminal to Berth 95. The project is being constructed in three phases; Phase I has been constructed and is operating as a container terminal. Phases II and III are anticipated to be constructed in the near future. The project would operate at optimal capacity by 2030. When operating at optimal capacity, the improved Berths 97-109 Container Terminal could handle approximately 1,551,000 TEUs per year, which represents an annual throughput of approximately 856,906 containers. To accommodate the annual throughput of 1,551,000 TEUs,

234 ship calls and associated tugboat operations would be required. In addition, a total of 5,055 daily truck-trips, and up to 817 annual roundtrip rail movements would be required.

TraPac Project: The TraPac Project would expand and modernize the container terminal at Berths 136-147, upgrade existing wharf facilities, and install a buffer area between the terminal and the community. The project includes a 30-year lease and would involve two phases of construction (Phase I: 2008-2015, Phase II: 2015-2025). Throughput capacity is expected to be maximized in 2025 and then remain constant through 2038, the end of the 30-year lease period. Most of the improvements would occur on 176 acres currently used as a container terminal operated by TraPac, but the project includes adding 67 acres to the new terminal – 57 in Phase I and 10 in Phase II. The 57 acres added in Phase I are largely vacant or underutilized industrial lands adjacent to the existing terminal.

2.24.4.3 Other Development Projects

Several development projects, including housing, commercial/retail, and mix-use developments, are undergoing planning or construction within the nearby communities of San Pedro and Wilmington. A few of these projects are located within the immediate vicinity of the project site, as described below:

Palos Verdes Urban Village: Construction of 251 condos and a 4,000-square-foot retail space at 550 South Palos Verdes Street, San Pedro, approximately 0.8-mile southeast of the SR 47/I-110 Connector. Construction has not begun, but it is estimated to be completed by 2011.

Condominiums: Construction of a 94-unit residential condominium project at 319 N. Harbor Boulevard, San Pedro, approximately 0.7-mile to the east-southeast of the SR 47/I-110 Connector. The construction date for this project is unknown.

Gas Station and Minimart: Construction of a 6-pump gas station and 1,390-square-foot minimart at 311 N. Gaffey Street, San Pedro, approximately 0.2-mile west of the connector. The project is currently on hold.

2.24.5 Resources Not Subject to Cumulative Impact Analysis

The proposed project is located in a fully developed, mixed-use urban setting adjacent to the Port of Los Angeles. The proposed work includes widening the SR 47/I-110 Connector from one to two lanes, extending an additional through lane on NB I-110 past the John S. Gibson Boulevard off-ramp, modifying the NB ramps at the I-110/John S. Gibson Boulevard interchange, and restriping the intersection at John S. Gibson Boulevard and the NB I-110 ramps. The project

would also include improvements to the existing drainage system and widening of the Pacific Avenue Undercrossing at SR 47 and the Channel Street Overhead at I-110.

Based on the nature of the proposed project, the nature of the project area, and the impact analysis for each resource prepared for this IS/EA, the following resources would not be substantially impacted by the proposed project and are not at risk:

- **Land Use:** Implementation of the proposed project would not require a revision to any of the adopted plans or policies at the local and regional levels. The Build Alternative would improve traffic congestion and traffic safety conditions, and it is compatible with current community plans. Implementation of the Build Alternative would not generate land use changes that could be in conflict with long-term plans and policies; therefore, the Build Alternative would have no adverse cumulative impacts on land use and planning.
- **Utilities and Emergency Services:** Although many service utilities would be affected by the construction activities, they are confined within the area adjacent to the project area. Once they are relocated, no cumulative effects to other service utilities, emergency services, or railroad would occur.
- **Traffic and Transportation/Pedestrian Facility:** As discussed in Section 2.7 of this IS/EA, the proposed project is aimed to provide operation improvement, and it would not result in impacts to existing transportation system, pedestrian safety, and parking on a permanent basis. The proposed projects listed in Section 2.24.4 would cumulatively add traffic volumes to the local roadway system in the vicinity of the proposed project after implementation. The Traffic Study prepared for this project has accounted for the general traffic growth and various known future foreseeable projects within the proposed project vicinity. No cumulative impacts are foreseen because the proposed project would not increase traffic volumes or induce traffic-generating development.

Traffic disruption during the 2.5-year construction phase of the Build Alternative could be expected. Temporary traffic lane closures and a transit route detour would impact commuters, local businesses, residents, and people using area public service facilities. Impacts to pedestrian safety near the construction zones would be potentially increased. Materials hauling in and out of various construction sites would obstruct the local traffic system. The level of these impacts would escalate if the construction period overlaps with other construction projects in the vicinity. Based on the known projects listed in Section 2.24.4, construction of the Schuyler Heim Bridge Replacement Project and the Gerald Desmond Bridge Replacement Project could overlap with the John S. Gibson Interchange Improvement Project and C Street Improvement Project possibly causing some traffic

conversion to I-110 freeway. The Port of Los Angeles and Port of Long Beach would coordinate and prepare the TMP to be implemented during the project construction period to cumulative traffic disruption within the affected area.

- **Visual/Aesthetics:** The Build Alternative would not substantially change the existing views of the project area. Some homeowners may experience view blockage from the proposed soundwall that would be built to abate future traffic noise impacts from the freeway. All affected residents have been given an opportunity to vote for or against the soundwall. Only the soundwalls within the public ROW that receive a majority vote would be built. The soundwall within a private property would have to receive 100 percent of the vote to be considered for construction.
- **Cultural Resources:** As described in Section 2.9 of this IS/EA, three historic resources exist within the project APE, including the West Belt Line Railroad, the San Pedro via Torrance Line Railroad, and archaeological site CA-LAN-283. The West Belt Line Railroad and the San Pedro via Torrance Line Railroad were evaluated as not eligible for the NRHP. Prehistoric archaeological site CA-LAN-283 was evaluated as eligible for the NRHP under Criterion D. With the proposed data recovery plan, no adverse effect to site CA-LAN-283 within the project APE would occur; therefore, no cumulative effects on cultural resources are anticipated.
- **Hydrology and Floodplain:** The area within the proposed construction zone is almost entirely built-out; therefore, no substantial increase in runoff flow is expected. Construction-related nuisance flows would be diverted into detention basins to be treated before discharging to existing storm drains. Construction site sheet flows would be retained to prevent construction runoff. Because the proposed project is not located in a 100- or 500-year floodplain, no flood flows would be impeded or redirected under the Build Alternative.

The proposed project would not create or contribute runoff that would exceed the capacity of the existing stormwater drainage system. The proposed project would not substantially alter the existing drainage pattern and would not substantially deplete groundwater supplies or interfere with groundwater recharge.

- **Water Quality and Stormwater Runoff:** Stormwater runoff occurring during construction and operation of the proposed project would be localized and confined within the site during construction and within the project area after construction is complete. No cumulative impacts pertaining to stormwater runoff would occur.

- **Geology/Soils/Seismicity:** Seismically induced impacts are localized and would not result in any cumulative impact as a result of the proposed project implementation.
- **Paleontology:** Impacts associated with paleontological resources are localized. No cumulative impacts are anticipated as a result of the proposed project implementation.
- **Hazardous Materials and Wastes:** Impacts associated with hazardous materials and wastes are localized. No cumulative impacts are anticipated as a result of the proposed project implementation.
- **Air Quality:** Based on the results of the air quality study prepared for this project, no adverse air quality impacts during construction would occur with mitigation measures incorporated. Implementation of the proposed project would not result in a violation of existing air quality standards.
- **Biological Environment:** Impacts associated with biological resources for this project are localized. No cumulative impacts are anticipated as a result of the proposed project implementation.
- **Climate Change:** As discussed in Section 2.18, climate change is by nature a global and cumulative impact. According to the AEP, in its paper titled *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*, “an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.”

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emissions reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation (see Climate Action Program at Caltrans, December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans, which was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

2.24.6 Resources Subject to Cumulative Effects

The following subsections address resources subject to cumulative effects.

2.24.6.1 Community Impacts

Resource Study Area

The project site is located in the community of San Pedro, within the City of Los Angeles, at the Harbor Freeway, I-110/SR 47 interchange. The Port of Los Angeles and the Port of Long Beach are located adjacent to the project site. The geographical area identified for the community impacts assessment covers the area that would potentially be either directly or indirectly affected by the proposed project activities. The primary impact area is located within a 0.25-mile radius of the project limits.

Health and Historical Context

A variety of land uses exist in the study area, including port/industrial, commercial, and residential. Land use characteristics within the study area are described in Section 2.3.2.2 of this IS/EA.

Project Impacts

Temporary impacts associated with Build Alternative construction include temporary ramp closures, local detours/short-term traffic delays, and temporary closure of the skate facility.

The proposed project would require a partial acquisition of one public property and some aerial easement above the Pacific Line Railroad track located underneath the Channel Street Overhead. Some temporary easement along the private properties may be required for the purpose of soundwall construction.

The proposed project would neither subdivide any established communities locally or regionally, nor would it create a barrier to interaction between parts of the community because the corridor improvements are being made to an existing corridor. The residential population that will be temporarily impacted has been demonstrated to constitute an environmental justice population, pursuant to EO 12898; however, the area subject to impacts displays a similar distribution of minority and/or low-income residents as does the larger adjacent and surrounding areas, including the City and County of Los Angeles. For these reasons, it is concluded pursuant to EO 12898 that no disproportionately high or adverse human health or environmental effects would occur on the minority or low-income populations in the project area.

Reasonably Foreseeable Actions

Several roadway improvement projects have been constructed or planned within the same locality as the proposed project, as presented in Section 2.19.4.

Cumulative Impacts

Community impacts associated with the reasonable foreseeable actions include road detours, temporary or permanent displacement of residents and workers, temporary or permanent disruption to businesses, and physical changes to local communities. Each future project will be required to analyze community impacts related to growth, community cohesion and character, and land use consistency. Consequently, specific avoidance, minimization, or mitigation measures would be identified. Because the proposed project would not require relocations of residences or businesses, community character would not be affected. Community impacts would be temporary and would be related to traffic detours and noise/air quality effects during construction. For these reasons, the project-related community impacts are not considered cumulatively considerable.

Avoidance, Minimization, or Mitigation Measures

The proposed project would implement a TMP to minimize impacts during construction, as outlined in Section 2.2.3 of this IS/EA. Adherence to land use and community requirements, including zoning ordinances, land use ordinances, traffic management plans, public outreach and notification plans, and relocation assistance, would be required for each of the reasonably foreseeable projects as applicable. Because the project's contribution to community impacts is not cumulatively considerable, additional measures are not required.

2.24.6.2 Noise

Resource Study Area

Because the proposed project is associated with roadway and freeway improvements, the resource study area for noise analysis includes the residential areas within the project vicinity that could be subject to traffic noise. Noise is localized and decreases rapidly with geographic distance.

Health and Historical Context

Three residential communities are located within the vicinity of the project site, as described in Section 2.16.3 of this IS/EA. Based on the results of field measurement, the existing noise levels at the noise receptors within the project study area have approached or exceeded the NAC. Even without the proposed project, noise levels at the receptors within the project area would continue to be affected by traffic noise in the future years.

Project Impacts

During the construction phase of the proposed project, noise from construction activities may intermittently dominate the noise environment within the immediate area of construction. This impact would be temporary and would cease after construction is complete. Because the

proposed project is a roadway improvement project, traffic noise impacts must be considered. The existing noise levels at the noise receptors within the project study area have approached or exceeded the NAC. Even without the proposed project, noise levels at the receptors within the project area would continue to be affected by traffic noise in the future years. Traffic noise impacts and proposed noise abatement measures were discussed in detail in Section 2.16 of this IS/EA.

Reasonably Foreseeable Actions

Several roadway improvement projects have been constructed or planned within the same locality as the proposed project, as presented in Section 2.19.4; however, none of these projects are located within the immediate vicinity of the proposed project site.

Cumulative Impacts

The noise analysis is based on the traffic data provided in the Traffic Analysis for the project. The traffic analysis considered all future projects predicted in the project vicinity through 2035; therefore, project impacts described above include the reasonably foreseeable projects through 2035. Based on the traffic noise analysis presented in Section 2.16.4, several receptors within the immediate vicinity of the project site would be subject to a noise level increase above the NAC; therefore, cumulative noise impacts from traffic operations would occur.

Avoidance, Minimization, or Mitigation Measures

Construction of seven soundwalls has been proposed and incorporated into this project to abate future noise impacts from traffic operations, as discussed in detail in Section 2.16.5. No further avoidance, minimization, or mitigation measures would be required.



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Chapter 3

Comments and Communication

Chapter 3 Comments and Communication

3.1 Introduction

Early and ongoing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, and public information meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

3.2 Scoping

Scoping is a process designed to examine a proposed project early in the environmental impact analysis and review process. Scoping is intended to identify the range of issues raised by the proposed project and to outline feasible alternatives or mitigation measures to avoid potentially significant environmental effects. The scoping process inherently stresses early consultation with local agencies, responsible agencies, review agencies, trustee agencies, tribal governments, and any federal agency whose approval or funding will be required for completion of the project.

Scoping is considered an effective way to bring together and resolve the concerns of other agencies and individuals who may potentially be affected by the proposed action, as well as other interested persons, such as the general public, who might not be in accord with the action on environmental grounds.

The environmental document for this project is an IS/EA. NEPA and CEQA regulations do not require an IS/EA to undergo formal scoping procedures; however, consistent with Caltrans' early involvement philosophy, and in light of the project's potential importance, scoping procedures were undertaken. An open house style scoping meeting was conducted on January 7, 2009, at Banning's Landing Community Center, located at 100 E. Water Street, Wilmington, CA 90744.

A Notice of Initiation of Studies (NOIS) and Open House was mailed to agencies and interested parties listed in Sections 5.1 and 5.2. In addition to that, an invitation to attend the Open House was mailed to all residents and property owners within the Wilmington and San Pedro Communities.

At the Open House, the Port and the Project Consultant Team members presented information about the proposed project and the environmental process to the participants. The public was invited to submit written comments, questions, and concerns to:

Eric Dietrich, Environmental Planner
Caltrans District 7
100 South Main Street
Los Angeles, CA 90012

or

Prashant Konareddy, P.E.
Engineering Division
Port of Los Angeles
425 South Palos Verdes Street
P.O. Box 151
San Pedro, CA 90733-0151

Copies of public notification/scoping letters and flyers are presented in Appendix B. Meeting notes for the Open House, as well as written comments submitted by the public, are included in Appendix C.

3.3 Consultation and Coordination with Public Agencies

Caltrans worked in close coordination with the Port well before commencement of the Project Report and Environmental Document preparation phase in late 2007. A summary of public agency consultation and coordination throughout the environmental review process of this project is provided below.

- As described in Section 3.2, a NOIS and an invitation to the Open House were mailed to agencies and interested parties listed in Sections 5.1 and 5.2. No representatives from any public agency other than Caltrans and POLA staff attended the Open House. No letters of comment were received from any public agency.
- During the course of the cultural resources study, a letter soliciting input was sent to the following agencies on April 21, 2009: San Pedro Bay Historical Society, Wilmington Historical Society, Historical Society of Southern California, Los Angeles City Historical Society, The Electric Railway Historical Association of Southern California, and Southern California Scenic Railway Association, Inc. No responses were received.

- In accordance with Section 106 of the National Historic Preservation Act (NHPA), on November 14, 2008, a request was made to the Native American Heritage Commission (NAHC) for a review of the Sacred Lands File (SLF) to determine if any known cultural resources are present within or adjacent to the project APE. The NAHC responded on November 17, 2008, stating that the SLF failed to indicate the presence of Native American cultural resources within the project vicinity. The NAHC requested that four Native American individuals and/or organizations be contacted to solicit any information or concerns regarding cultural resources issues related to the proposed project.
- Letters requesting information about the project area and comments about the project were sent to the following Native American contacts on November 19, 2008: Cindi Alvitre, John Tommy Rosas, Anthony Morales, Sam Dunlap, and Robert Dorame. In a telephone conversation with Anthony Morales on December 8, 2008, he requested grading monitoring by archaeological and Native American monitors because he considers the area to be sensitive. In a letter from Robert Dorame dated January 30, 2009, he requested grading monitoring by a Native American from his group because the area is sensitive. In a telephone conversation with Sam Dunlap on March 6, 2007, he requested grading monitoring by an archaeologist because there may be buried remnants of the sites that were recorded in the area. In an e-mail from John Tommy Rosas received on November 20, 2008, he stated that he objects to and opposes the proposed project based on “past and current indigenous rights violations by [Port], *et al.*; and City and Caltrans.” He requested direct consultation with the Caltrans Tribal Liaison. Consultation with Mr. Rojas was carried out under the auspices of the Federal guidelines for Section 106 consultation as an interested Native American party. During this consultation, Mr. Rojas requested that nondestructive geophysical testing be carried out at site CA-LAN-283. The geophysical testing was carried out during the week of August 22, 2009 by Caltrans, and the results were incorporated into the HPSR prepared for this project (Note that the HPSR was sent to Mr. Rojas for his information). A follow-up phone call was made to Cindi Alvitre on December 17, 2008, and a voice mail message was left. A second follow-up phone call was made to Cindi Alvitre on January 29, 2009, but she has not responded.
- Based on the result of cultural resources study, Caltrans has determined that the undertaking (the Project) will have an adverse effect on historic properties (Site CA-LAN-283) pursuant to Section 106 PA Stipulation X.C and, has consulted with the State Historic Preservation Officer (SHPO) regarding the resolution of adverse effects, pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a), and 800.6(b)(1). SHPO has concurred with Caltrans’ findings on December 9, 2010 (FHWA101101A). A data recovery plan for the portion of archaeological site CA-LAN-283 that would be adversely

affected by the proposed project will be prepared following guidance in Attachment 6 of the Section 106 PA and will be included as a stipulation in the Memorandum of Agreement (MOA) to be signed between Caltrans, the SHPO, and the LAHD. Caltrans will ensure that the data recovery plan entitled “Data Recovery Plan for the Portion of CA-LAN-283 to be affected by the John S. Gibson Boulevard/ I-110 Access Ramps and SR 47/I-110 Connector Improvements Project” is implemented. The data recovery plan would be implemented prior to commencement of ground-disturbing activities for construction of soundwalls S241 and S247.

- Caltrans has also determined that the National Register-eligible archaeological site CA-LAN-283 is exempt from Section 4(f) as described in 23 CFR 744.13b(1) as this archaeological resource is important under Criterion D chiefly because of what can be learned from data recovery and has minimal value for preservation in place. In accordance with 23 CFR 744.13b(2), Caltrans has consulted with SHPO, and received SHPO concurrence on February 4, 2011.

3.4 Public Participation

3.4.1 Open House

An open house style scoping meeting was conducted on January 7, 2009, at Banning’s Landing Community Center, located at 100 E. Water Street, Wilmington, CA 90744. The Port and the Project Consultant Team members presented information about the proposed project and the environmental process to the participants. The attendants had an opportunity to ask questions and raise concern about the project both verbally and in writing. The Port and the Project Development Team members responded to all of the questions, as documented in the meeting minutes (Appendix C). The main issues and concerns that were expressed include:

- Closure of the skate facility
- Potential increase in traffic volume
- Noise impacts
- Air quality impacts
- Vibration impacts

3.4.2 Outreach Activities Regarding Soundwall Construction

Based on the results of the Noise Study Report, eight soundwalls were proposed for construction to abate future traffic noise at the affected receptors within the vicinity of the I-110/SR 47 interchange, as described in Section 2.16 of this IS/EA. The property owners of residences where the proposed soundwalls would be constructed were invited to attend the soundwall focus meeting held on May 12, 2010, to obtain information regarding the proposed soundwalls. All

affected property owners were given an opportunity to vote for or against the proposed soundwall located next to their property line. During the soundwall focus meeting, several questions were asked by the affected residents. Some of them requested the soundwall not be constructed adjacent to their property, and some asked that the soundwall be extended to cover their property. The Port and Caltrans have considered all requests by conducting additional studies prior to refining the length of each proposed soundwall. The final decision regarding soundwall construction will be made after the environmental document (this IS/EA) is circulated for public review and comment.

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Chapter 4

List of Preparers

Chapter 4 List of Preparers

4.1 California Department of Transportation

Karl Price, Senior Environmental Planner	Environmental process oversight, document reviewer
Eric Dietrich, Environmental Planner	Document coordinator and reviewer
Gary Iverson, Senior Environmental Planner	Cultural Resources reviewer
Noah M. Stewart, Associate Environmental Planner	Cultural Resources reviewer
Alex Kirkish, District Archaeologist	Cultural Resources reviewer
Andrew Yoon, Transportation Engineer	Air Quality Study reviewer
Jin Lee, Senior Noise Engineer	Noise Study reviewer
Steve Chan, Hazardous Waste Branch Chief	Initial Site Assessment and Site Investigation reviewer
Paul Caron, Senior Biologist	NES reviewer

4.2 Port of Los Angeles

Sue Lai	Program Manager
Prashant Konareddy	Project Manager
Lisa Ochsner	Environmental Supervisor
Guillermo Martinez	Transportation Engineer
Sal Zambrano	Harbor Engineer, Chief of Design

4.3 Report Preparers

Parsons Transportation Group, Inc.

Anne Kochaon, QEP, Project Manager	Environmental Project Manager, document coordinator, technical reviewer
Nasrin Behmanesh, Ph.D., Principal Air Quality Specialist	Air Quality Technical Report preparer

Angela Schnapp, Senior Planner	Document compilation coordinator
Jeff Lormand, Principal Landscape Architect	Visual Impact Assessment preparer
Thanh Luc, Noise Specialist	Noise Study Report preparer
Carrie Chasteen, Senior Architectural Historian	Cultural Resources Study reviewer
Pika Fejeran, Associate Planner	Data collection and research
Leslie Provenzano, Associate Planner	Data collection and research
Lincoln Walker, Environmental Planner	Document compilation coordinator
Elizabeth Koos, Technical Editor	Document editor

ECORP Consulting, Inc.

Roger Mason, Ph.D. Principal Investigator	Archaeological Resource Survey preparation
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Group Delta, Inc.

Vesna Glisic, P.E. Project Engineer	ISA Addendum preparer, Phase II Site Investigation preparer
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Iteris, Inc.

Vamshi K. Akkinapally, P.E., Transportation Engineer	Traffic Analysis Report preparer
Dilip N. Malave, P.E., Transportation Engineer	Traffic Analysis Report preparer

Diverse Strategies for Organizing

Tony Torres, Vice President	Public Outreach Manager
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Chapter 5 Distribution List

Chapter 5 Distribution List

This Draft IS/EA will be made available for review by the general public, government agencies, and other interested parties. The following officials, agency representatives, and interested parties will receive either a copy of the draft document or a notice informing them of its availability.

5.1 Elected Officials

5.1.1 Federal

Congressperson Lucille Roybal-Allard (District 33)

Congressperson Xavier Becerra (District 30)

Senator Barbara Boxer

Senator Diane Feinstein

5.1.2 State

State Senator Laura Richardson, District 55

State Assembly Member Jenny Oropeza, District 28

5.1.3 Local

Los Angeles County Supervisor Gloria Molina, District 1

Los Angeles County Supervisor Yvonne B. Burke, District 2

Los Angeles County Supervisor Zev Yaroslavsky, District 3

Los Angeles County Supervisor Don Knabe, District 4

Los Angeles County Supervisor Michael D. Antonovich, District 5

5.1.4 City of Los Angeles

Mayor Antonio Villaraigosa

Councilwoman Janice Hahn, District 15

5.2 Government Agencies

5.2.1 Federal

U.S. Fish & Wildlife Service

U.S. Army Corps of Engineers – Los Angeles District

U.S. Environmental Protection Agency Region 9

U.S. Federal Emergency Management Agency

U.S. Department of Transportation, Federal Highway Administration

U.S. Department of Energy
U.S. Department of Housing and Urban Development
U.S. Department of Interior
U.S. Department of Agriculture
U.S. Department of Commerce
U.S. National Marine Fisheries Service
U.S. Coast Guard
Natural Resources Defense Council
Native American Tribal Councils

5.2.2 State

Office of Planning and Research, State Clearinghouse
Office of Attorney General
Office of Environmental Health and Hazards
State Historic Preservation Office
California Air Resources Board
California Coastal Commission
California Department of Fish and Game
California Highway Patrol
California Resources Agency
California Regional Water Quality Control Board
California State Lands Commission
California Department of Transportation, Headquarters
California Department of Transportation – District 7
California Transportation Commission
California Native American Heritage Commission

5.2.3 Regional

Southern California Association of Governments
South Coast Air Quality Management District
South Bay Cities Council of Governments

5.2.4 Los Angeles County

County Clerk
Los Angeles County Board of Supervisors
County of Los Angeles Department of Regional Planning
County of Los Angeles Metropolitan Transportation Authority

County of Los Angeles Department of Public Works
County of Los Angeles Sanitation District
County of Los Angeles Department of Health Services

5.2.5 City of Los Angeles

Nearby Cities

City of Los Angeles Planning Department
City of Los Angeles Department of Transportation
City of Los Angeles Department of Public Works Bureau of Engineering
City of Los Angeles Bureau of Sanitation
Los Angeles Department of Water and Power
Los Angeles City Department of Building and Safety
Los Angeles City Clerk
Los Angeles Fire Department
Harbor Community Police Station

Other Interested and Potentially Affected Parties

Metropolitan Transportation Authority
Long Beach Public Library, Main Branch
Los Angeles City Library Department
Los Angeles City Library Department, San Pedro Branch
Los Angeles City Library Department, Wilmington Branch
Coalition for Clean Air
Port Community Advisory Committee
Central San Pedro Neighborhood Council
Northwest San Pedro Neighborhood Council
Banning Park Neighborhood Associations
Wilmington Neighborhood Council
Wilmington Chamber of Commerce
San Pedro Chamber of Commerce
San Pedro and Peninsula Homeowners Association
Heal the Bay
Pacific Maritime Shipping Association
Coastal and Harbor Hazards Council
Port of Long Beach
City of Rancho Palos Verdes
Riverside County Transportation Commission

City of Riverside City Attorney's Office
Best Best & Krieger LLP
Barton Hill Elementary School
Bandini Street Elementary School
Harbor Occupational Center
Harbor Community Adult School
Los Angeles Unified School District
California Native Plant Society
South Bay of Economic Development Partnership, Inc.
Sierra Club

5.3 Native American Representatives Consulted

Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians
Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
Sam Dunlap, Gabrielino Tongva Council/Gabrielino Tongva Nation
Ron Andrade, Los Angeles City/County Native American Indian Commission
Cindi Alvitre, Ti'at Society
John Tommy Rosas, Tongva Ancestral Territorial Tribal Nation
Robert Dorame, Gabrielino Tongva Indians of California Tribal Council

5.4 General Public

Port of Los Angeles mailing list (Appendix D)
Affected property owners
Residents in San Pedro and Wilmington

Appendix A California Environmental Quality Act Checklist And Additional Analysis Pertaining to CEQA

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment and attachments to this Checklist. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2 and attachments to this Checklist.

Caltrans has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on farmlands/timberlands, mineral resources, growth, and Section 4(f) resources.
- The proposed project would have no significant effect on land use, community character and cohesion, environmental justice, hydrology and floodplains, geology/soils/seismicity, and air quality.
- With mitigation measures incorporated, the proposed project would have no significant effect on the following resources: community disruption, property acquisition, utilities and public services, traffic and transportation, visual resources, cultural resources, paleontological resources, hazardous materials, noise, and biological resources.

CEQA Environmental Checklist

07-LA-110
07-LA-47

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P.M/P.M.

E.A.

This 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 indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included in Section VI following the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project does not have a designated scenic vista in the area. I-110 and SR 47 are not considered state scenic highways. During construction, there is a possibility of a degradation of visual quality due to presence and operation of construction equipment; however, this impact would only be during the duration of the construction period. Anticipated new plantings will assist in improving the overall visual quality of the proposed project area. No additional lighting as a result of constructing the proposed project is anticipated; therefore, no substantial lighting or glare would result from construction of the proposed project.

Note that the soundwalls to be installed to abate the traffic noise levels in the residential areas located on the west side of the I-110 freeway may block the view of some residents living along Gaffey Street. If the majority of the residents object to the soundwall, then it will not be built.

Please see Section 2.8 for more details.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE 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. Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The proposed project is located in a highly developed, urban area of Los Angeles with no farmland or agricultural resources within the project area or vicinity. There will be no impact to any agricultural resource.

III. 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:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed project is located in the South Coast Air Basin, which is non-attainment for ozone and small particulate materials. Construction of the proposed project would marginally increase the emission of these air contaminants on a temporary basis as a result of operating construction equipment; clearing of debris and asphalt; onsite excavation and grading; and transportation of demolition debris and excavated material to offsite disposal locations. With the adherence to the Sustainable Construction Guidelines for reducing air emissions from all LAHD-sponsored construction projects, the impacts to air quality during construction would be minimized to the less than significant level.

IV. BIOLOGICAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project site is located within an urbanized industrial area of the City of Los Angeles and does not contain any significant biological resources, including riparian habitats, wetlands, or protected trees. However, there are gaps in the Channel Street Overhead that birds or bats may use for roosting during part of the year. Mitigation measures are discussed in the IS/EA. Please see Section 2.17 for more details.

- | V. CULTURAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

A cultural resources record search was performed to identify previously recorded cultural resources within the survey area and within a 1 mile radius. Three cultural resources have been recorded within the Project APE. These are prehistoric archaeological sites. Two occur within areas that have been significantly graded during freeway construction. One site is an undisturbed site. This site is located where a soundwall may be placed. Options are being investigated in an attempt to not disturb this site. No known burial grounds are known to exist in the project area. If previously unidentified cultural materials are unearthed during construction or if human remains are accidentally discovered, work in the area will be halted until all appropriate and lawful measures have been implemented.

There is the potential to encounter significant vertebrate fossils in the older quaternary alluvial deposits, and Palos Verdes and San Pedro sand deposits.

Please see Section 2.9 for more details.

- | VI. GEOLOGY AND SOILS: Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Southern California is an area known to be seismically active and prone to earthquakes, which may result in hazardous conditions to people and property within the region. The proposed project would be designed and constructed to meet seismic requirements of the local, state, and federal agencies governing the project.

Short-term erosion impacts could occur during the construction phase of the project. During grading, excavation, and other site preparation activities, unearthed and exposed soil could potentially be eroded. Implementation of standard erosion control measures would minimize these potential impacts.

VII GREENHOUSE GAS EMISSIONS. Would the project:

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

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, 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 significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is characterized by industrial and commercial land use. A potential to encounter hazardous wastes/materials exists within the proposed project's footprint. An Initial Site Assessment (ISA) was conducted for the project to identify any hazardous waste or material sites or any potentially contaminated areas listed by federal, state, and local agencies (GDC, 2009). Based on ASTM 1527-05 standard search distances, 213 sites were identified in the database search. Two sites have been determined to present a Recognized Environmental Condition (REC) having the potential to cause soil and/or groundwater contamination.

A site investigation (SI) was conducted at the area east of the interchange. Results of the SI revealed small amounts of ADL, pesticide and herbicide, and TPH-diesel contamination in a few samples of soil and groundwater at the project site. Soil and groundwater analysis would be required prior to any soil disposal and groundwater dewatering activities to ensure proper handling and disposal of contaminated soil and groundwater. Additional soil sampling will be conducted at the proposed soundwall construction area west and south of the interchange because these soundwalls were proposed after the original SI was completed. The results of the supplemental SI will be included in the final IS/EA.

The proposed project is located within a heavy traffic area near the Port of Los Angeles. Construction activities related to the proposed project would require traffic lane closures, which would be likely to interfere with traffic flows. Emergency response and evacuation plans that use affected roadways would be impacted in the short term. Advanced communication with emergency response providers and implementation of a Traffic Management Plan (TMP) would be required to minimize the impacts to a less than significant level.

The IS/EA discusses potential impacts associated with hazardous waste and materials, including interference with emergency response plans because of project construction. Mitigation measures to minimize these construction phase impacts to a less than significant level have been identified. Please see Section 2.14 for more details.

IX. HYDROLOGY AND WATER QUALITY: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A Storm Water Management Plan (SWMP) and Best Management Practices (BMPs) will be employed to reduce the discharge of pollutants. These will ensure that no water quality standards or discharge limits are exceeded. No groundwater would be required by the proposed project. The existing drainage pattern would not be changed as a result of the proposed project. While the area of impervious surface is expected to increase slightly as a result of the proposed project, the additional runoff is not anticipated to exceed the capacity of existing systems. Water quality is not anticipated to change as a result of the proposed project. Housing is not part of the proposed project. No structures would be constructed which would impede flood flows. No dams or levees are within the project area. While the project is situated along the coast, Los Angeles has not had a tsunami with significant inundation on record. Please see Sections 2.10 and 2.11 for more details.

X. LAND USE AND PLANNING: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
---	--------------------------------	---------------------------------------	------------------------------	-----------

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Project construction takes place on existing freeway infrastructure and does not divide an existing established community. Please see Section 2.3 for more details.

Implementation of the proposed project would not require land use or zoning modifications at the proposed project site or its surrounding area. As a result, the proposed project would not be in conflict with land use goals and policies of the City of Los Angeles General Plan and Community Plans, as well as the Port of Los Angeles Master Plan.

The proposed improvements lie mostly within the City of Los Angeles and Caltrans right-of-way. Widening of I-110 NB on-ramp would require a partial acquisition of one City owned property, an aerial easement over the Pacific Harbor Line railroad tracks, and temporary easement of residences located adjacent to Caltrans right-of-way where the soundwalls are proposed for constructions. These acquisitions would not result in obstruction of the current or planned operations of the subject properties. Please see Section 2.4 for more details.

To ensure the health and safety of the skateboarders, the skate facility under the Channel Street Overhead will be closed during Channel Street widening construction.

There are no designated critical habitats for threatened or endangered species occur within the project area of potential effects. Therefore, the project does not conflict with any applicable habitat conservation plan or natural community conservation plan. Please see Sections 2.2 and 2.17 for more details.

- | XI. MINERAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The proposed project is located in a highly urbanized area of the City of Los Angeles. No mineral resources that would be of value to the region or residents of the state have been identified in the vicinity of the project site. The State Department of Conservation has not designated the project site as a Significant Mineral Aggregate Resources Area; thus, no impacts resulting from the loss of mineral resources are anticipated. No further study is required.

- | XII. NOISE: Would the project result in: | Potentially Significant Impact | Less Than Significant with Mitigation | 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Ambient noise levels may temporarily increase when construction equipment is operating during construction only. In addition, residents, businesses, and the general public along the designated traffic detour and material hauling routes could experience higher noise levels and ground-borne vibration during the construction period. The project would fully comply with the City's noise ordinance during construction or require a permit from the Police Commission. The IS/EA analyzes noise impacts as a result of project construction and identifies appropriate mitigation measures to minimize the project's impacts.

Following construction, the proposed project is not expected to result in a substantial permanent increase in ambient noise levels in the project vicinity above noise levels existing without the project because the project would not cause an increase in traffic volumes in the project area. Please see Sections 2.16 for more details.

XIII. POPULATION AND HOUSING: Would the project:

- | | Potentially Significant Impact | Less Than Significant with Mitigation | 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project would not have any growth-inducing effects and would not result in the extension of roads or other infrastructure. The project would require minor right-of-way acquisition. The IS/EA addresses the right-of-way acquisition impacts. Environmental justice impacts are addressed in the IS/EA. Please see Sections 2.2, 2.4 and 2.5 for more details.

XIV. PUBLIC SERVICES:

- | | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-----------|
|--|--------------------------------|---------------------------------------|------------------------------|-----------|

a) Would the project 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:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed project would not require additional police and fire protection or generate the need for new police or facilities in the area. Since the project is not growth-inducing, no need for new schools, parks or other public facilities would be required. Please see Section 2.6 for more details.

XV. RECREATION:

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not generate any additional population; therefore, it would not increase demand for neighborhood or regional parks or other recreational facilities. Please see Section 2.2 for more details.

XVI. TRANSPORTATION/TRAFFIC: Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

During construction, some traffic may be rerouted to designated detour routes. Both a Traffic Management Plan and a Construction Management Plan will be prepared to address the impact from traffic rerouting, planned haul routes, and temporary lane closures during construction.

Once the project is in operation, there would be no change in traffic capacity or level of service within the local or regional networks related to the project construction.

No parking would be taken as a result of the proposed project. No alternative transportation plans, policies or programs are in the project area; therefore, no impacts would be expected.

Please see Section 2.7 for more details.

- | XVII. UTILITIES AND SERVICE SYSTEMS: Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The proposed project would require relocation of several public utilities as well as a single track of the Pacific Harbor Line railroad.

The proposed project has detention basins proposed as part of the project design. No exceedances of wastewater treatment requirements are anticipated. No new treatment facilities will be required. The landfills where demolition debris and other construction debris will be transferred have ample capacity to handle the disposal requirements. All federal, state and local statutes and regulations related to solid waste will be followed. Please see Section 2.6 for more details.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	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, 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project site is presently developed and devoid of significant fish, wildlife, and/or plant populations. Construction activities would not degrade or have adverse impacts on the natural environment. Several known or foreseeable projects are planned within the vicinity of the proposed project site. The IS/EA identifies all related projects in the immediate vicinity of the proposed project and analyzes them for potential cumulative effects. Mitigation measures to reduce adverse cumulative impacts, where appropriate, are identified and presented in the IS/EA.

Attachment A Additional Air Quality Impact Analyses

As discussed in Section 2.15.3.3 of the IS/EA, some impact analyses including quantitative construction emissions are not considered applicable to most transportation projects (such as the proposed project) by Caltrans and Federal highway Administration (FHWA), pursuant to the National Environmental Policy Act (NEPA). However, the Los Angeles Harbor Department (LAHD), as the local sponsor and the responsible agency for the proposed project, requires such analyses for all of its projects; therefore, this section addresses the air quality analysis components as required by the LAHD to determine the level of significance pursuant to the California Environmental Quality Act (CEQA). Detailed calculations including input and output data are presented in the Air Quality Technical Report (AQTR) prepared by Parsons, dated May 2010.

Furthermore, in early 2011, LAHD added a new baseline scenario - existing condition plus future project (if the project existed at the time of NOP) – to be analyzed in fulfillment of the CEQA requirement.

1. Methodology and Significance Criteria

For Port projects, the screening criteria, threshold levels, and analysis methodologies in the South Coast Air Quality Management District (SCAQMD) guidance document *CEQA Air Quality Handbook, November 1993* (Handbook) is used to evaluate projects air quality impacts. As the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SCAB), the SCAQMD recommends that projects should be evaluated in terms of air pollution control thresholds established by the SCAQMD and published in the CEQA Air Quality Handbook. These thresholds were developed by the SCAQMD to provide quantifiable levels that projects can be compared to. The use of SCAQMD thresholds has been adopted by the LAHD.

Table 1 outlines the threshold criteria recommended for use in evaluating the effects of projects emissions on existing air quality. SCAQMD thresholds are set at a level that either promote or maintain regional attainment of the relevant ambient air quality standards.

Based on the Handbook guidelines, daily emissions were calculated for a worst-case day. The worst-case day represents the maximum or peak daily emissions that can reasonably be expected during any phase of construction. The construction schedule and information needed to perform emissions analysis were provided by the project construction engineers. This information includes type and number of pieces of equipment used in each phase; acreage of disturbed area

per day; and amount of cut and fill material, number of haul trucks and construction workers, and average trip length of haul trucks and workers commuting to and from the jobsite.

Table 1 SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds ^a		
Pollutant	Maximum Emission (lbs/day)	
	Construction	Operation
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550
Lead	3	3
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and noncarcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants ^b		
<u>NO₂</u> 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (338 µg/m ³) – state 0.030 ppm (56 µg/m ³) – state	
<u>PM₁₀</u> 24-hour average annual geometric average annual arithmetic mean	10.4 µg/m ³ (construction) ^c and 2.5 µg/m ³ (operation) 1.0 µg/m ³ 20 µg/m ³	
<u>PM_{2.5}</u> 24-hour average	10.4 µg/m ³ (construction) ^c and 2.5 µg/m ³ (operation)	
<u>CO</u> 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (23,000 µg/m ³) – state 9.0 ppm (10,000 µg/m ³) – state/federal	
lbs/day – pounds per day; ppm – parts per million; µg/m ³ – microgram per cubic meter; ≥ – greater than or equal to		
^a Based on SCAQMD CEQA Handbook ¹		
^b Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.		
^c Ambient air quality threshold based on SCAQMD Rule 403.		

Source: SCAQMD, 2007².

To estimate peak construction emissions, daily emissions were forecast for a period with most-intensive construction activities, which would occur from overlapping construction phases

¹ SCAQMD, 1993. South Coast Air Quality Management District. *Air Quality Handbook for Environmental Impact Reports*. November.

² SCAQMD, 2007a. South Coast Air Quality Management District. Web site: www.aqmd.gov/CEQA/handbook/signthres.doc

during each year of construction. The CARB OFFROAD 2007 emissions model was used to develop exhaust emission factors for the various types of off-road construction equipment to be used for project construction. The EMFAC2007 emissions model was used to develop the emission factors for on-road trucks and employee vehicles. Fugitive dust emission factors were based on guidance from SCAQMD.

The localized effects from the onsite portion of construction emissions to the offsite receptors were evaluated using the guidelines in the *Localized Significance Threshold (LST) Methodology for CEQA Evaluations*.³ The LSTs and the mass rate look-up tables were developed based upon the size or total area of the emissions source, the ambient air quality in each source receptor area, and the distance to the sensitive receptor. Look-up tables are provided in the document for construction with disturbed areas of 5 acres or less.

The SCAQMD document: *Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM_{2.5} Significance Thresholds* document (October 2006) provides appropriate guidance for analyzing PM_{2.5} portion of fugitive dust emissions. Since PM_{2.5} is a subset of PM₁₀, the current methodology for calculating PM_{2.5} from fugitive dust sources (e.g., grading, demolition, unpaved roads, open storage piles) is based on estimated PM₁₀ emissions. Total suspended particulate matter emissions typically contain specific fractions of PM₁₀ and PM_{2.5} that can be measured. In general, particulate matter from fugitive dust-generating sources is primarily composed of PM₁₀, with a relatively small fraction of the fugitive particulate matter consisting of PM_{2.5}. According to the report, fugitive dust contains approximately 21 percent PM_{2.5}.

1.2 Construction Emissions Analysis

a) Regional Construction Impact

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific mix of construction equipment and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Based on the construction schedule, peak daily construction emissions were calculated using a set of conservative assumptions for the maximum daily activities and the equipment mix associated with those construction activities. Attachment B1 of the Air Quality Technical Report (AQTR, Parsons 2010) includes the equipment list and assumptions for emission calculations. Air pollutant emissions were analyzed covering each construction year to assess impacts to air quality.

³ SCAQMD, 2003. Localized Significance Threshold (LST) Methodology for CEQA Evaluations. June.

Table 2 summarizes the estimates of peak daily construction emissions. Emissions exceeding the SCAQMD thresholds are shown in bold type.

**Table 2 Estimate of Peak Daily Regional Construction Emissions^a
(pounds/day)**

Construction Year	VOC	NO _x	CO	PM ₁₀ ^b	PM _{2.5}
YEAR 1 – 3 months					
Peak Concurrent Activities (Month 12)					
Onsite	9	70	32	8	4
Offsite ^c	3	32	21	1	1
Total	12	102	53	9	5
SCAQMD Regional Daily Significance Threshold^d	75	100	550	150	55
Over/(Under) regional threshold	(63)	2	(497)	(141)	(50)
Exceed Threshold?	No	Yes	No	No	No
YEAR 2					
Peak Concurrent Activities (Month 11)					
Onsite	8	62	29	8	4
Offsite ^c	3	40	25	2	1
Total	11	102	54	10	5
Over/(Under) regional threshold	(64)	2	(496)	(140)	(50)
Exceed Threshold?	No	Yes	No	No	No
YEAR 3					
Peak Concurrent Activities (Month 1)					
Onsite	7	60	30	5	3
Offsite ^c	3	36	25	2	1
Total	10	96	55	7	5
Over/(Under) regional threshold	(65)	(4)	(495)	(143)	(50)
Exceed Threshold?	No	No	No	No	No
^a Compiled using the CEQA Air Quality Handbook and the emissions inventory from OFFROAD model. The equipment mix and use assumption for each phase is provided by the construction engineer, a list of which is included in Attachment B1. ^b PM ₁₀ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression. ^c Offsite emissions include motor vehicle emissions associated with construction equipment transport to the site, workers' commute, and debris-hauling activities. ^d SCAQMD thresholds are adopted by the POLA for analysis, but not by Caltrans; the threshold analyses are provided for informational purposes.					

Source: Parsons, 2009.

b) Localized Construction Impact

The localized effects from onsite construction emissions were evaluated to determine whether the proposed project construction would result in offsite pollutant concentrations that would exceed the ambient air quality standards (AAQS) at the nearest sensitive receptor locations.

Based on construction schedule and phasing planned for this project, it was estimated that the maximum disturbed area during any phase of project construction would be one acre. The lookup

tables in the LST document⁴ for projects with maximum disturbance areas of less than or equal to 1 acre were used to determine applicable LSTs for the project. The closest sensitive receptors to the project, as described in Section 2.4 of this technical study report, include the residents on the hillside above I-110 and SR 47, and the Barton Hill Elementary School. These receptors are located approximately 800 feet from the project construction site. The proposed project location is on the boundary of two SRAs: the South Coastal Los Angeles County (SRA # 4) and Southwest Coastal Los Angeles County (SRA # 3), which have different background pollutant concentrations and different LSTs for each pollutant.

The maximum daily onsite emissions and localized SCAQMD’s significance thresholds are presented in Table 3. As shown, peak construction activities would not cause an exceedance of localized thresholds at any time during construction period.

Table 3 Estimate of Peak Daily Localized Construction Emissions (pound/day)

Analyzed Construction Stage/Phase	Maximum Onsite Pollutants Emissions (pounds/day)			
	CO	NO _x	PM ₁₀	PM _{2.5}
Maximum Construction Onsite Emissions				
Nearest Sensitive Receptors^a – 200 meters from construction site				
Year 1	32	70	8	4
Year 2	29	62	8	4
Year 3	30	60	5	3
SCAQMD Localized Daily Significance Threshold ^{b,c}	2,296/2,367	72/139	61/56	26/21
Exceed Threshold?	No	No	No	No
^a The nearest sensitive receptors include residents on the hillside above the I-110 and SR 47 interchange and the Barton Hill Elementary School approximately 800 feet from the construction site boundary. ^b The project site is located at the boundary of two SRAs: SRA No. 3 and SRA No. 4. In regard to the LST look-up tables, this analysis assumed that no more than 1-acre would actively be disturbed at one time. The LSTs, as shown, present values as: “LST in SRA No. 4/ LST in SRA No. 3”. ^c SCAQMD thresholds are adopted by the POLA for analysis, but not by Caltrans; the threshold analyses are provided for informational purpose.				

Source: Parsons, 2009.

c) Toxic Air Contaminants (TAC)

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic TACs are usually described in terms of individual cancer risk, which is based on a, which is based on a 70-year lifetime exposure to TACs. Given the construction schedule of 27 months, and considering that most grading and excavation activities would occur intermittently during different construction phases, the

⁴ SCAQMD, 2003. Localized Significance Threshold (LST) Methodology for CEQA Evaluations. June.

proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions, with no residual emissions after construction and corresponding individual cancer risk.

Asbestos Based on the Initial Site Investigation report for the proposed project, no indicator of asbestos containing materials (ACM) was observed within the project site; therefore, project construction activities would not have a potential for release of ACM.

d) Odors

During project construction, potential sources of objectionable odors would be related to the operation of diesel-powered equipment and to off-gas emissions during road-building activities, such as paving and asphaltting. Such odors, however, would be short-term and limited to the area where the specific activity is occurring. The perception of these odors is dependent upon climatic conditions such as temperature, humidity, wind speed, and wind direction. Furthermore, SCAQMD Rule 1113 (Architectural Coatings) limits the amount of volatile organic compounds (VOCs) from paving, asphalt, concrete curing, and cement coatings operations. Construction of the proposed project would be performed in compliance with SCAQMD Rules, which limit VOC emissions. In addition, construction activities would be located within fenced, secured sites as far from receptors as feasible, with no public access. Due to the relatively short-term nature of construction odors, controlled access, and distance to the nearest receptors, odors are not likely to affect a substantial number of people.

4. Operational Emissions

The AQTR analyzed regional emissions as a result of project operation. The primary source of air pollutant emissions generated by the proposed project would be from motor vehicles traveling along the project segments on I-110, SR 47, and the connector ramps within the project limits. To determine the regional direct operational impact, criteria pollutant emissions from vehicles traveling in the project study area were estimated and compared with the No Build Alternative for existing year (2009), opening year (2014) and horizon year (2035). Annual Average Daily Traffic (AADT), average speed on each segment, and peak-hour traffic data for the No Build and Build Alternatives were provided by the project Traffic Study⁵. Emission factors were obtained using the EMFAC2007 model.⁶ The emission factors selected from the EMFAC2007 results were based on the projected average speed for each of the considered scenarios, per the traffic study. The results are summarized in Table 4. As shown, the project operational emissions for the Build Alternative are either similar to or slightly lower than the No-Build conditions for all criteria pollutants for the analyzed years (i.e., 2009, 2014 and 2035).

⁵ Iteris, 2009. *Traffic Operations Analysis Report – I-110/John S. Gibson Boulevard Improvement Project*, August.

⁶ CARB, 2007b.

Table 4 Summary of Project Daily Operational Emissions

Year	Alternative	Criteria Pollutants Emission (lbs/day)					
		VOC	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
2009	Existing	19.8	361.9	198.9	0.7	49.4	13.7
	Existing plus Proposed Project	19.7	361.4	199.0	0.7	49.4	13.7
Opening Year 2014	No Build	15.9	268.5	195.8	0.9	59.6	16.4
	Build	15.7	266.7	195.6	0.9	59.6	16.4
	Project Increment	-0.2	-1.9	-0.2	0.0	0.0	0.0
	Net change from 2008	-4.1	-95.3	-3.3	0.2	10.2	2.7
Horizon Year 2035	No Build	4.8	105.5	57.1	1.1	70.0	15.3
	Build	4.7	104.6	56.8	1.1	70.0	15.3
	Project Increment	-0.1	-0.9	-0.3	0.0	0.0	0.0
	Net change from 2008	-15.1	-257.3	-142.1	0.4	20.5	1.6

Notes:

1. Exhaust emissions are calculated using emission factors from EMFAC2007, at the projected average speed of each roadway segment within the study area (from Traffic Study).
2. Estimates of directly emitted PM emissions include tailpipe (exhaust gases), tire wear, brake wear, and the contribution from re-entrained or road dust emissions. The paved road dust emission factor was calculated using the EPA's empirical equation (AP-42):

$$E = k \left(\frac{SL}{2} \right)^{0.65} \times \left(\frac{W}{3} \right)^{1.5} \times \left(1 - \frac{P}{4N} \right)$$
3. ADT and average speed data are summarized in Appendix A of this Air Quality Report.
4. The calculation worksheets are included in Appendix A to this report.

Source: Parsons, 2011

Table 4 presents a summary of the project daily operational emissions of criteria pollutants for Build and No Build Alternatives of the existing year (2009) and the future year (opening year 2014, and horizon year 2035). As Table 4 shows, the emissions for baseline 2009 and project plus baseline 2009 are very similar (with less than 0.1 percent change). Operation of the proposed project (Build Alternative) would result in emissions of criteria pollutants, which compared to the existing condition (i.e., 2009 emissions), show reduction in daily emissions of CO, NO_x and VOC (as ozone precursors); and slight increase for SO₂ during the future analyzed years. Because the re-entrained road dust emissions are considered in calculation of directly emitted particulates, emissions of PM₁₀ and PM_{2.5} show a relatively small increase in the future analyzed years (i.e., 2014 and 2035), compared with the 2008 emissions (9.8 lbs/day PM₁₀ and 2.4 lbs/day PM_{2.5} in 2014; 20.2 lbs/day PM₁₀ and 1.3 lbs/day PM_{2.5} in 2035, compared with 2008 emissions). The increases compared with the CEQA base year are well below the SCAQMD threshold levels of 150 lbs/day for PM₁₀ and 55 lbs/day of PM_{2.5}.

Local operational impacts is addressed in terms of project-level conformity analysis, and is presented in Section 2.15.3.2 of this IS/EA. The proposed project is not determined as the Project of Air Quality Concern (POAQC); therefore a PM hot-spot analysis is not required. In addition,

based on the screening analysis, it is concluded that the project is satisfactory for the screening-level analysis, and no further qualitative or quantitative CO analysis is required.

5. Avoidance/Minimization Measures

Table 2 shows that maximum daily construction emissions during peak construction activities would exceed the SCAQMD's regional threshold of NO_x emissions, during construction period.

The project construction processes will comply with and adhere to all applicable rules and regulations, such as SCAQMD Rule 403 for fugitive dust control, Rule 1113 for control of VOC emissions from asphalt operations, and other pertinent requirements concerning the operation of construction equipment and dust control. Caltrans Standard Specifications for construction (Sections 10 and 18 [Dust Control] and Section 39-3.06 [Asphalt Concrete Plants]) will also be adhered to. Furthermore, Section 93.122(d)(2) of the EPA Transportation Conformity Rule requires that in PM₁₀ and PM_{2.5} nonattainment and maintenance areas (for which the SIPs identify construction-related fugitive dust as a contributor to the area problem), the RTIP should conduct the construction-related fugitive PM emission analysis. The 2003 PM₁₀ and 2007 SIP AQMP emissions budgets for SCAB include the construction and unpaved road emissions. The 2008 RTIP PM₁₀ and PM_{2.5} regional emissions analysis includes the construction and unpaved road emissions for conformity finding.

The LAHD has also developed *Sustainable Construction Guidelines* for reducing air emissions from all LAHD-sponsored construction projects, as shown on Attachment B. The Guidelines include the use of Best Management Practices (BMP) to reduce or eliminate environmental impacts from construction activities. The applicable Caltrans and LAHD BMPs for project construction include the following measures.

- AQ-1.** Construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.
- AQ-2.** During construction, trucks and vehicles in loading and unloading queues must be kept with their engines off when not in use for more than 5 minutes to reduce vehicle emissions. Construction activities shall be phased and scheduled to avoid emissions peaks, where feasible, and discontinued during second-stage smog alerts.
- AQ-3.** Where available, use electricity from power poles rather than temporary diesel- or gasoline-powered generators.
- AQ-4.** Construction activities that affect traffic flow on the arterial roadways shall be scheduled to off-peak hours to the extent possible. Additionally, construction trucks shall be directed away from congested streets or sensitive receptor areas.

AQ-5. Where possible, enforce truck parking restrictions; provide on-site services to minimize truck traffic in or near residential areas, including services such as meal or cafeteria.

AQ-6. Apply water or dust palliative to the site and equipment as frequently as necessary to control fugitive dust emissions.

AQ-7. Use low-sulfur fuel in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.

Measures AQ-1 through AQ-7 would provide reduction measures for pollutants from construction equipment exhaust emissions. Measures AQ-1 provides a 5 percent reduction of all pollutants, including NO_x, in the exhaust emissions.⁷ Table 5 presents the construction emissions with the feasible reduction measures incorporated.

Table 5 Estimate of Minimized Construction Emissions^a (lbs/day)

Construction Year	VOC	NO _x ^b	CO	PM ₁₀ ^c	PM _{2.5} ^c
Peak Daily Construction Emissions					
YEAR 1					
Onsite	9	66	31	7	4
Offsite	4	32	32	2	2
Total Minimized Emission	13	98	63	9	6
SCAQMD Regional Daily Significance Threshold	75	100	550	150	55
Exceed Threshold?	No	No	No	No	No
YEAR 2					
Onsite	7	59	28	6	3
Offsite	5	40	35	2	2
Total Minimized Emission	12	99	63	8	5
Exceed Threshold?	No	No	No	No	No
YEAR 3					
Onsite	7	57	29	4	3
Offsite	3	41	25	2	1
Total Minimized Emission	10	98	54	6	4
Exceed Threshold?	No	No	No	No	No
Peak Daily Mitigated Onsite Emissions					
SCAQMD Localized Daily Threshold at nearest sensitive receptor	-	72/139	2,296/2,367	61/56	26/21
Year 1	9	66	31	7	4
Year 2	7	59	28	6	3
Year 3	7	57	29	4	3
^a Minimizations/ reductions are applied to onsite construction activities. ^b Minimization measure consists of maintaining construction equipment properly tuned. Exhaust emissions reduction is 5 percent for all criteria pollutants. Use of oxidation catalyst for the construction equipment, would reduce NO _x onsite emissions up to 20 percent. These data are shown in parentheses.					

Source: Parsons, 2009.

⁷ SCAQMD, 1993. South Coast Air Quality Management District. *Air Quality Handbook for Environmental Impact Reports*. November.

Based on the above discussion, with applying the recommended minimization measures, air quality impacts from construction of the proposed project would be less than the SCAQMD's threshold of significance.

No minimization measures are needed for project's long-term (operational) air emissions.

Attachment B LAHD Sustainable Construction Guidelines for Reducing Air Emissions

**LOS ANGELES HARBOR DEPARTMENT
SUSTAINABLE CONSTRUCTION GUIDELINES
FOR REDUCING AIR EMISSIONS**

REVISED NOVEMBER 2009

These guidelines shall apply to all construction projects advertised for bids by the LAHD after the date of approval of this resolution. The LAHD is not precluded from adding additional more stringent requirements as they become technologically available.

I. General Construction Best Management Practices

The LAHD shall implement a process to add Best Management Practices (BMPs) to reduce air emissions from all LAHD-sponsored construction projects. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list and project scope. The LAHD shall then meet with the contractor to identify potential BMPs and work with the contractor to include such measures in the contract. BMPs shall be based on Best Available Control Technology (BACT) guidelines and may also include changes to construction practices and design to reduce or eliminate environmental impacts.

BMPs include:

- 1) Use of diesel oxidation catalysts and catalyzed diesel particulate traps
- 2) Maintain equipment according to manufacturers' specifications
- 3) Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of 5 minutes when not in use
- 4) Install high-pressure fuel injectors on construction equipment vehicles
- 5) Maintain a minimum buffer zone of 300 meters between truck traffic and sensitive receptors
- 6) Improve traffic flow by signal synchronization
- 7) Enforce truck parking restrictions
- 8) Provide on-site services to minimize truck traffic in or near residential areas, including, but not limited to, the following services: meal or cafeteria services, automated teller machines, etc.
- 9) Re-route construction trucks away from congested streets or sensitive receptor areas
- 10) Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- 11) Use electric power in favor of diesel power where available.

Applicable to all Projects: All construction activities located within 1,000 feet of sensitive receptors (defined as schools, playgrounds, daycares, and hospitals) shall notify each of these sites in writing at least 30 days before construction activities begin.

CEQA PROJECTS: The above mitigation measures shall be added as a mitigation measure but not quantified.

II. Specific Environmental Measures

In addition to the above described BMPs, the following specific environmental measures and/or practices shall be added to LAHD construction specifications where applicable.

Vessels

All ships & barges used primarily to deliver construction-related materials to a LAHD-contractor construction site shall comply with the expanded Vessel Speed Reduction Program (VSRP) of 12 knots between 40 nautical miles (nm) from Point Fermin and the Precautionary Area.

These ships must also use low-sulfur fuel (maximum sulfur content of 0.2 percent) in auxiliary engines, main engines, and boilers within 40 nm of Point Fermin.

CEQA PROJECTS: Include as mitigation and quantify

Harbor Craft

Prior to December 31, 2010: All harbor craft with C1 or C2 marine engines must achieve a minimum emission reduction equivalent to a U.S. Environmental Protection Agency (EPA) Tier-2 level off-road marine engine.

From January 1, 2011 on: All harbor craft with C1 or C2 marine engines must utilize a U.S. EPA Tier-3 engine, or cleaner.

The above measure shall be met, unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- 1) A piece of specialized equipment is unavailable in a controlled form, or within the required Tier level within the state of California, including through a leasing agreement.
- 2) A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the project, but the application process is not yet approved, or the application has been approved, but funds are not yet available.
- 3) A contractor has ordered a control device for a piece of equipment planned for use on the project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the project has the controlled equipment available for lease.

CEQA PROJECTS: Include as mitigation and quantify

Dredging Equipment

All dredging equipment shall be electric.

CEQA PROJECTS: Include as mitigation and quantify

On-Road Trucks

- 1) Trucks hauling material such as debris or any fill material will be fully covered while operating off Port property.
- 2) Idling will be restricted to a maximum of 5 minutes when not in use.
- 3) EPA Standards:
 - a. On-road trucks except for Import Haulers and Earth Movers:
 - 1) Prior to December 31, 2011: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NOx (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).
 - 2) From January 1, 2012 on: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used at the Port of Los Angeles will comply with EPA 2007 on-road emission standards for PM10 and NOx (0.01 g/bhp-hr and at least 1.2 g/bhp-hr, respectively).
 - b. For Import Haulerⁱ Only:
 - 1) Prior to December 31, 2011: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 1998 on-road emission standards for PM10 and NOx (0.10 g/bhp-hr and 4.0 g/bhp-hr, respectively). In addition, such trucks shall be equipped with a CARB verified Level-3 Device.
 - 2) From January 1, 2012 on: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NOx (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).
 - c. For Earth Moversⁱⁱ Only:
 - 1) Prior to December 31, 2011: All heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 1998 on-road emission standards for PM10 and NOx (0.10 g/bhp-hr and 4.0 g/bhp-hr, respectively).
 - 2) From January 1, 2012 on: All heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NOx (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).

A copy of each unit's certified EPA rating and each unit's CARB or SCAQMD operating permit, will be provided at the time of mobilization of each applicable unit of equipment.

CEQA PROJECTS: Include as mitigation and quantify (will need to know the approximate number of import haulers and earth movers—if not known, assume 80% on road trucks 10% import haulers and 10% earth movers)

Construction Equipment (excluding Vessels, Harbor Craft, and On-Road Trucks)

- 1) Construction equipment will incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards.
- 2) Idling will be restricted to a maximum of 5 minutes when not in use.
- 3) Equipment Engine Specifications:
 - a. ***Prior to December 31, 2011:*** All off-road diesel-powered construction equipment greater than 50 horsepower (hp), except marine vessels and harbor craft, will meet Tier-2 off-road emission standards at a minimum. In addition, all construction equipment greater than 50 hp will be retrofitted with a CARB-verified Level 3 Diesel Emissions Control Device system (DECS).
 - b. ***From January 1, 2012, to December 31, 2014:*** All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier-3 off-road emission standards at a minimum. In addition, all construction equipment greater than 50 hp will be retrofitted with a CARB-verified Level 3 DECS.
 - c. ***From January 1, 2015 on:*** All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier-4 off-road emission standards at a minimum.

The above "Equipment Engine Specifications" measures shall be met, unless one of the following circumstances exists, and the contractor is able to provide proof that any of these circumstances exists:

- A piece of specialized equipment is unavailable as specified in 3(a), 3(b) or 3(c) within 200 miles of the Port of Los Angeles, including through a leasing agreement. If this circumstance exists, the equipment must comply with one of the options contained in the *Step Down Schedule* as shown in Table A below. At no time shall equipment meet less than a Tier 1 engine standard with a CARB-verified Level 2 DECS.
- The availability of construction equipment shall be reassessed in conjunction with the years listed in the above Tier Specifications (Prior to December 31, 2011, January 1, 2012 and January 15, 2015) on an annual basis. For example, if a piece of equipment is not available prior to December 31, 2011, the contractor shall reassess this availability on January 1, 2012.

Table A: Compliance Step Down Schedule

Compliance Alternative	Engine Standard	CARB-verified DECS	PM Emissions* g/bhp-hr	NOx Emissions g/bhp-hr
1	Tier 4	N/A	0.01	0.3
2	Tier 3	Level 3	0.02	2.9
3	Tier 2	Level 3	0.02	4.7
4	Tier 1	Level 3	0.06	6.9
5	Tier 2	Level 2	0.08	4.7
6	Tier 2	Level 1	0.11	4.7
7	Tier 2	Uncontrolled	0.15	4.7
8	Tier 1	Level 2	0.2	6.9
<i>Equipment less than Tier 1, Level 2 shall not be permitted</i>				

**Stated emissions levels are for engine horsepower ratings of 176 bhp and above.*

Emissions levels for engine bhp ratings below 176 hp are marginally higher.

(.02-.08 g/bhp-hr depending on hp, Tier & VDEC level)

CEQA PROJECTS: Include as mitigation but quantify as modified:

In 2011 assume:

50% Tier 2 Level 3, 20% Tier 1 Level 3, 20% Tier 2 Level 2, and 10% Tier 1 Level 2.

In 2012 to 2014 assume:

50% Tier 3 Level 3, 20% Tier 2 Level 3, 10% Tier 1 Level 3, 10% Tier 2 Level 2, and 10% Tier 1 Level 2.

In 2015 on, assume:

50% Tier 4, Tier 3 Level 3, 20% Tier 3 Level 3, 10% Tier 1 Level 3, 10% Tier 2 Level 2, and 10% Tier 1 Level 2)

Fugitive Dust Control

SCAQMD Rule 403 requires a Fugitive Dust Control Plan be prepared and approved for construction sites. Construction contractors are required to obtain a 403 Permit from SCAQMD prior to construction.

The following measures to reduce dust should be included in the contractor's Fugitive Dust Control Plan, at a minimum:

- SCAQMD's Best Available Control Technology (BACT) measures must be followed on all projects. They are outlined on Table 1 in Rule 403. Large construction projects (on

a property which contains 50 or more disturbed acres) shall also follow Rule 403 Tables 2 and 3.

- Active grading sites shall be watered three times per day.
- Contractors shall apply approved non-toxic chemical soil stabilizers to all inactive construction areas or replace groundcover in disturbed areas.
- Contractors shall provide temporary wind fencing around sites being graded or cleared.
- Trucks hauling dirt, sand, or gravel shall be covered or shall maintain at least 2 feet of freeboard in accordance with Section 23114 of the California Vehicle Code. (“Spilling Loads on Highways”).
- Construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off tires of vehicles and any equipment leaving the construction site.
- The grading contractor shall suspend all soil disturbance activities when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas shall be stabilized if construction is delayed.
- Open storage piles (greater than 3 feet tall and a total surface area of 150 square feet) shall be covered with a plastic tarp or chemical dust suppressant.
- Stabilize the materials while loading, unloading and transporting to reduce fugitive dust emissions.
- Belly-dump truck seals should be checked regularly to remove trapped rocks to prevent possible spillage.
- Comply with track-out regulations and provide water while loading and unloading to reduce visible dust plumes.
- Waste materials should be hauled off-site immediately.
- Pave road and road shoulders where available.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.
- Require the use of clean-fueled sweepers pursuant to SCAQMD Rule 1186 and Rule 1186.1 certified street sweepers. Sweep streets at the end of each day if visible soil is carried onto paved roads on-site or roads adjacent to the site to reduce fugitive dust emissions.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

CEQA PROJECTS: Include as mitigation and quantify as a 90% reduction in fugitive dust.

ⁱ Import Haulers are defined as all trucks hauling dirt to and from the construction site via public roadways.

ⁱⁱ Earth Movers are defined as all trucks moving and/or working in dirt within the construction site (i.e. trucks are confined to the construction site and do not regularly enter or exit public roadways).

Appendix B Resources Evaluated Relative to the Requirements of Section 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties located within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

Leland Recreational Center

Leland Recreational Center is located at 863 S. Herbert Avenue in San Pedro, which is approximately 0.2-mile to the west of the proposed project site. This recreational center is separated from the project site by the I-110 freeway and the residential community along Gaffe Street which is situated at a higher elevation than the project site (see Figure B-1). Recreational facilities offered at this park include basketball courts, a baseball diamond, children's play area, picnic tables, and volleyball courts. The types of athletic activities (basketball, baseball games, etc.) that take place at the field do not require quiet surroundings. Improvements to the John S. Gibson interchange under the Build Alternative as outlined under Chapter 1 – Project Description would not require a direct use (acquisition) of this recreational center. Because the park is located on the opposite side of the I-110 freeway and is separated by the entire residential community along Gaffe Street, no indirect use such as rerouted traffic would occur within the area adjacent to this recreation center. In addition, no substantial effects from construction noise and air pollutant emissions would occur during construction and operation of the Build Alternative which would have temporary or permanent disruptive effects on the use of this recreational center. Therefore, the proposed project will not cause a constructive use of Leland Recreational Center because the proximity impacts will not substantially impair the protected activities, features, or attributes of the center.

Channel Street Skating Place

At the Channel Street Overhead to the north of the SR 47/I-110 interchange, a skate facility lies underneath the freeway (see Figure B-1). This piece of land was originally owned by Southern Pacific Railroad Company. The State (Caltrans) received the easement from Southern Pacific

Railroad in 1969. The easement did not allow the State to grant any easement/right, privilege which will interfere with the operation and maintenance of the railroad. The Southern Pacific Railroad granted the land to the Port of Los Angeles and the Port of Long Beach in 1994 (12/29/1994 No. 94-2282144).

The skate facility was informally started in 2002 by a group of local skateboarders without a permit from either the Los Angeles Harbor Department (who owns and operates the Port of Los Angeles) or Caltrans. It is likely that the group of skateboarders back then saw this land as vacant, and felt no one would mind if the area under the freeway was to be used as a temporary skate park. Due to the complexity of ownership and jurisdictional control of the land area, no governmental unit took an immediate action to prohibit the development of the skate facility.

The San Pedro Skate Park Association, recently registered as a nonprofit organization, was formed to support the skate park with a volunteer staff maintaining the facility. The organization's website expresses that "this is not a public park or playground." The Skate Park Association in 2003 indicated in its email correspondence with Caltrans Park-N-Ride Coordinator that they seek for a 2-year revocable permit to use the area for skateboarding activities; at the time they envisioned a move to another nearby facility as part of the Bridge to Breakwater promenade development. Caltrans did not issue any permit to use the area per the Association's request. As time evolves, and they invested more volunteer time and money in upgrading and expanding into the Channel Street skateboard facility, the urgency to find another location has been diminished.

The land occupied by the skateboard operations is not designated as park land either in the San Pedro Community Plan, City of Los Angeles General Plan, or the Port of Los Angeles Master Plan, and neither does the City of Los Angeles Department of Recreation and Parks identify this as a facility in its comprehensive on-line list of public skate parks [www.laparks.org/dos/parks/skateparks]. The Los Angeles Harbor Department, the current owner of the land, does not plan to designate the area to be permanent recreational use. Although the Southern Pacific Railroad, who held title to the land beginning in the late nineteenth/early twentieth century, had transferred the land to the Port, the current railroad company still reserves a right of using an easement for purposes of transporting rail cars. Currently the railroad track is being used on a daily basis by the Pacific Harbor Line, Inc. In addition, Caltrans continues to hold easement rights above the land underneath the freeway. Any construction by Railroad or its affiliated companies will be subject to approval/encroachment permit from Caltrans for the purpose of

public safety and compatibility with highway purposes. Therefore, clearly, the major intended purpose of the land is solely for transportation, and not recreational in nature.

For all the above reasons, this facility is not considered a Section 4(f) resource and the provisions of Section 4(f) are not triggered.

As part of the environmental review process, Caltrans and the Port of Los Angeles staff have reached out to the general public including the group of skateboarders about the proposed John S. Gibson Interchange Improvement Project. A number of skateboarders attended the Open House meeting held on January 7, 2008 at Banning's Landing Community Center and were given an opportunity to express their concern and ask questions. The Port of Los Angeles staff has also met with the staff of City of Los Angeles Councilwoman Janice Hahn during the project development phase to provide the information about the project. The local skateboarders have been made aware that, for safety purposes, the skateboarding area has to be closed during the bridge widening construction. Based on the current design, the skate facilities that currently exist would not be adversely affected by the bridge widening.

Cultural Resources within Project APE

Historic properties in the Project Area of Potential Effects (APE) were identified in an Archaeological Survey Report (ASR) (October 2009), a Historical Resources Evaluation Report (HRER) (October 2009), an Extended Phase I Report (Ex Ph I) (October 2009), a Supplemental ASR (January 2010), and a Supplemental Ex Ph I Report (March 2010). The West Belt Line Railroad and the San Pedro via Torrance Line Railroad were identified in the APE in the HRER and were evaluated as not eligible for the National Register of Historic Places (NRHP) in the HRER. Prehistoric archaeological sites CA-LAN-152 and CA-LAN-283 were identified in the records search carried out for the ASR. CA-LAN-152 was determined to either have been destroyed or buried by over 10 feet of fill. A remnant of CA-LAN-283 with intact subsurface deposits was identified in the APE as a result of the Supplemental Ex Ph I. The Supplemental Ex Ph I consisted of shovel test pits and hand-excavated units placed where soundwalls will be built along the top of the slope on the west side of the I-110/SR 47 interchange. CA-LAN-283 was evaluated as eligible for the NRHP under Criterion D in an Archaeological Evaluation Report (AER) (September 2010).

Caltrans has also determined that the National Register-eligible archaeological site CA-LAN-283 is an exception to requirements of Section 4(f) as described in 23 CFR 744.13b(1) as this archaeological resource is important under Criterion D chiefly because of what can be learned

from data recovery and has minimal value for preservation in place. In accordance with 23 CFR 744.13b(2), Caltrans has consulted with SHPO, and received SHPO concurrence on February 4, 2011 (see Attachment B-1).

Neither the Harbor Belt Line West Basin Line nor the Harbor Belt Line San Pedro via Torrance Line is eligible for listing in the NRHP and therefore neither is considered to be a 4(f) resource; as stated above, Site CA-LAN-152 may have been previously destroyed or it is buried below that level which this project would ultimately reach. As discussed above, as concurred with by SHPO, because the values of archaeological site CA-LAN-283 are in the potential important prehistoric information the site may yield, the property is exempt from Section 4(f).



Figure B-1: Locations of Nearby Park

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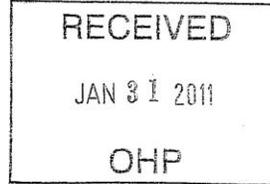
ATTACHMENT B-1

DEPARTMENT OF TRANSPORTATION

DISTRICT 7
DIVISION OF ENVIRONMENTAL PLANNING
100 MAIN STREET, SUITE 100
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0703
FAX (213) 897-2593
TTY (213) 897-4937



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January 25, 2011

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
California Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816-7100

Subject: 23 CFR 744 Section 4(f) exemption for CA-LAN-283, John S. Gibson Boulevard/Interstate 110 (I-110) Access Ramps and State Route 47 (I-47)/ Connector Improvements Project, City of Los Angeles, Los Angeles County, California – FHWA101101A

Dear Mr. Donaldson,

The California Department of Transportation (Caltrans) is consulting with the State Historic Preservation Officer (SHPO) regarding an exemption to 23 CFR 744, Section 4(f), for CA-LAN-283, located within the proposed improvements to the John S. Gibson Boulevard/Interstate 110 (I-110) Access Ramps and State Route 47 (I-47)/ Connector Improvements Project, City of Los Angeles, Los Angeles County, California.

Caltrans is consulting as a federal agency, following the provisions of the *Memorandum of Understanding (MOU) between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program*, which became effective on July 1, 2007. The MOU was signed pursuant to Section 6005 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, which allows the Secretary of Transportation to assign, and the State of California to assume, responsibility for FHWA's responsibilities under the National Environmental Policy Act as well as consultation and coordination responsibilities under other federal environmental laws. In that this project is covered by the above referenced MOU, FHWA has assigned, and Caltrans has assumed, FHWA responsibility for environmental review, consultation, and coordination on this project.

Caltrans has previously consulted with your office regarding this project under the Programmatic Agreement (PA) Among the Federal Highway Administration, 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. Consultation identified the prehistoric archaeology site CA-LAN-283 as eligible for the National Register of Historic Places (National Register) under criterion D, as it has yielded and is likely to yield information relevant to important research questions. The SHPO concurred with our determination of eligibility in a letter dated December 9, 2010. Additionally, Caltrans found the project, as proposed, would have an adverse effect on CA-LAN-283. The SHPO concurred with our finding of adverse

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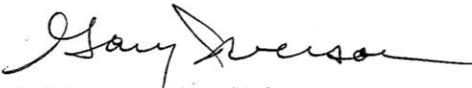
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
California Department of Parks and Recreation
Office of Historic Preservation
Page 2

effect for the undertaking a letter dated January 6, 2011. Currently, Caltrans and the SHPO are in consultation regarding a resolution of adverse effects: a proposed data recovery plan.

Concurrently with the Section 106 process, Caltrans developed a Draft Environmental Document, which includes an analysis of Section 4(f) resources. Caltrans determined that the National Register-eligible site CALAN-823 is exempt from Section 4(f) as described in 23 CFR 744.13b(1), as archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. In accordance with 23 CFR 744.13b(2), Caltrans is submitting its conclusion to the SHPO, who is the official with jurisdiction over the Section 4(f) resource, for consultation. If the SHPO does not object to Caltrans' determinations under 23 CFR 744.13b(1), please inform us at your earliest convenience. To simplify the process, we have included at the bottom of this letter a signature line for you to sign if the SHPO concurs with Caltrans' findings.

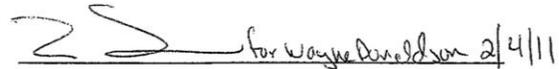
If you need and additional information, please contact Noah Stewart, Associate Environmental Planner/Architectural History, at (213) 897-2601 or noah_stewart@dot.ca.gov. Thank you with your assistance with this undertaking.

Sincerely,



GARY IVERSON, Chief
Central Area Project/Cultural Resources Services
Caltrans District 7
Division of Environmental Planning

Cc: Anmarie Medin – CCSO HQ
Jill Hupp – CCSO HQ

 for Wayne Donaldson 2/4/11
I concur with the findings (date)

Appendix C PM Hot-Spot Analysis Conformity Determination

**TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS**

**January 26, 2010
Minutes**

O'Connor, Karina	U.S. EPA, Region 9
Odufalu, Olufemi	Caltrans, District 8
Tax, Wienke	EPA Region 9
Torres, Eddie	RBF Consulting
Williams, Leann	Caltrans, District 7
Yoon, Andrew	Caltrans, District 7

1.0 CALL TO ORDER

Shirley Medina, RCTC, called the meeting to order at 10:12 a.m.

2.0 PUBLIC COMMENT PERIOD

There were no comments.

3.0 CONSENT CALENDAR

3.1 Approval Item

3.1.1 TCWG December 1, 2009 Meeting Minutes

Clarification: Under Item 4.6 Air Districts Update/VCAPCD, only the motor vehicle emissions budgets of the Ventura County 8-hour Early Progress Plan were found adequate for conformity.

The minutes were approved with the above clarification.

4.0 INFORMATION ITEMS

4.1 Review of PM Hot Spot Interagency Review Forms

1) LA0C8086

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

2) LA0D390

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

PROGRAMS & PROJECTS

Compass Blueprint

Environment

Air Quality

Energy

Environmental Impact Reports

Environmental Justice

Intergovernmental Review

Solid & Hazardous Waste Management

Water

Housing

Local Profiles

Overall Work Program

Regional Comprehensive Plan

Regional Transportation Improvement Program

Regional Transportation Plan

SB 375 Regional Implementation Process

State of the Region

Strategic Plan

Transportation

REGIONAL COUNCIL

Districts & Representatives

Executive Officers

Governing Structure

LEGISLATION

State & Federal Programs

Find Your Representative

DATA SERVICES

Demographics, Trends & Statistics

Emergency Information Network

Goods Movement Database

Integrated Growth Forecast

Mapping & GIS

Modeling

MEDIA & COMMUNICATIONS

Press Room

Publications & Reports

SCAG TV - Streaming Videos

TCWG Project-Level PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

January 2010	Determination
LA0C8086 LA0C8086 Attachment 1 LA0C8086 Attachment 2 LA0C8086 Attachment 3	Not a POAQC - Hot Spot analysis not required
LA0D390 LA0D390 Figures	Not a POAQC - Hot Spot analysis not required
LA0F030 LA0F030 Figures	Not a POAQC - Hot Spot analysis not required
ORA030612 ORA030612 Figures ORA030612 References	
ORA2A0803 ORA2A0803 Figure 1	Not a POAQC - Hot Spot analysis not required
SBD200435 SBD200435 Attachment A	Not a POAQC - Hot Spot analysis not required

<p>RTIP ID# <i>(required)</i> LA0D390</p>
<p>TCWG Consideration Date January 26, 2010</p>
<p>Project Description <i>(clearly describe project)</i> The Port of Los Angeles (POLA or the Port), in cooperation with the California Department of Transportation (Caltrans) District 7, proposes to improve the northbound (NB) Interstate 110 (I-110) ramps at John S. Gibson Boulevard (West Channel Street interchange) and the NB I-110 and southbound (SB) State Route (SR) 47/NB I-110 Connector. The project will be funded by the Port and by federal funds.</p> <p>The project alternatives under consideration include No Build and a Build Alternative.</p> <p><u>Build Alternative</u> includes the following main features as shown in Figure 1.</p> <p>1) <u>SB SR 47/NB I-110 Connector Widening</u>: The SR 47/I-110 connector would be widened improve weaving operation for vehicles connecting from the SB SR 47 to the NB I-110, and for vehicles entering SR 47/I-110 at the Front Street on-ramp. The widening would include adding a single 12-foot-wide traffic lane to the existing SR 47/I-110 connector between 180 feet west of the Front Street/SR 47 on-ramp and NB I-110/John S. Gibson Boulevard off-ramp. At the Pacific Avenue Undercrossing, the widening would range from 9 feet to 11 feet to the north of the existing edge of deck. As the connector separates from SR 47 and continues north to join I-110, it would be slightly realigned to the west side of the traveled way for an approximate distance of 15 feet.</p> <p>2) <u>NB I-110 Auxiliary Lane Construction</u>: Widening of the SR 47/I-110 connector would continue northward with the addition of an auxiliary lane of approximately 900 feet in length. Along this section, the Channel Street Overhead (bridge structure) would be widened by approximately 14 feet. The bridge structure would require construction of four columns to support the widened segment of the structure. One of the columns would be located at or near the existing Pacific Harbor Line Railroad track, which is owned and operated by the POLA and Port of Long Beach, requiring realignment of the track. The railroad realignment would occur entirely outside of John S. Gibson Boulevard and would be contained within the existing railroad right-of-way (ROW).</p> <p>3) <u>NB I-110 at John S. Gibson Boulevard On- and Off-Ramp Improvements</u>: The NB I-110 off-ramp at John S. Gibson Boulevard would be widened to provide standard lane width, shoulder, and turning radius for trucks. The NB I-110 on-ramp at John S. Gibson Boulevard would also be widened to provide standard lane width and shoulders. The ramp would be lengthened and realigned to the east for an improved vertical alignment, resulting in a new edge of pavement ranging from 12 feet to 42 feet east of the existing ramp. The current on-ramp at the entrance gore has a stopping sight distance of 350 feet, which is for a design speed of less than 45 miles per hour (mph). The proposed ramp geometry would improve the design speed to 50 mph to comply with Caltrans current design standards. The profile grade would also be improved from 5.8 percent to 5 percent to improve truck traffic. The two-lane on-ramp would be reduced to one lane over a standard 600-foot lane taper before adding one lane to the existing three-lane section of the NB I-110.</p> <p>4) <u>John S. Gibson Boulevard Intersection Improvements</u>: John S. Gibson Boulevard would be re-stripped for an approximate distance of 1,700 feet to accommodate the long left-turn configuration. Sidewalk would be constructed along the SB side south of the intersection.</p> <p>In addition to the improvements described above, a soundwall could potentially be constructed within the State right-of-way along the property line of the residences located adjacent to the SR 47/I-110 Connector to minimize freeway noise impacts.</p> <p>The proposed project is mainly an improvement to the existing roadway facilities, no alternatives other than Build and No Build were considered for traffic improvement in this area. Because the purpose of the project is to improve safety and traffic operation by geometric changes to the roadways, Transportation Systems Management (TSM) and Transportation Demand Management (TDM) Alternatives would not fulfill the purpose and need of the project, and therefore do not apply to this project.</p>

Type of Project <i>(use Table 1 on instruction sheet)</i> Reconfigure existing interchange & partial Roadway realignment.				
County Los Angeles	Narrative Location/Route & Postmiles John S. Gibson Boulevard/I-110 Interchange Arterial street and freeway-to-freeway interchange improvements at SR 47 (Vincent Thomas Bridge) and I-110; and modification to I-110 NB on-off ramps termini at John S. Gibson Boulevard. Caltrans Projects – EA# 26060K			
Lead Agency: Caltrans District 7				
Contact Person Andrew Yoon	Phone# 213/897-6117	Fax# 213/897-1634	Email Andrew_Yoon@dot.ca.org	
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 <input checked="" type="checkbox"/> PM10 <input checked="" type="checkbox"/>				
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
Categorical Exclusion (NEPA)	<input checked="" type="checkbox"/> EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:				
NEPA Delegation – Project Type <i>(check appropriate box)</i>				
Exempt	Section 6004 – Categorical Exemption	<input checked="" type="checkbox"/> Section 6005 – Non-Categorical Exemption		
Current Programming Dates <i>(as appropriate)</i>				
	PE/Environmental	ENG	ROW	CON
Start	2008	2010	2011	2011
End	2010	2011	2011	2014
Project Purpose and Need (Summary): <i>(attach additional sheets as necessary)</i> The purpose of the project is to achieve the following objectives: <ul style="list-style-type: none"> • Improve access for trucks to the I-110 North freeway using the John S. Gobson Boulevard on- and off-ramps; • Improve safety for traffic traveling from SB SR 47 connecting to NB I-110; and • Reduce existing and forecasted traffic congestion. <p>The future years' traffic volume for the SB SR 47 to NB I-110 Connector is expected to increase and exceed the current limit for a single-lane connector. As a result, the SB SR 47 mainline would experience backup. Currently, traffic from the on-ramp at Front Street enters SB SR 47 at a relatively slow speed compared to the traffic on SR 47 heading south from the Vincent Thomas Bridge. The weaving distance between the merge point of the on-ramp and the split of the NB I-110 and SB SR 47 freeways is approximately 720 feet in length. This short weaving distance has created an operational deficiency, requiring traffic heading SB on SR 47 to suddenly slow down to allow the existing slow-moving on-ramp traffic the opportunity to merge with traffic on the connector. With the expected traffic demand in the future, this operational deficiency is expected to worsen without operational improvements.</p>				
Surrounding Land Use/Traffic Generators <i>(especially effect on diesel traffic)</i> Land uses adjacent to the proposed improvements sites include Port of Los Angeles West Basin, east of the project corridor; office buildings on the west side of John S. Gibson Boulevard; and residential uses on the hillside above I-110 and SR 47. Sensitive receptors in the project vicinity are shown in Figure 2. The proposed project would not affect the existing nearby land uses or truck traffic generation factors.				

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

The proposed project would not impact traffic volumes or mix, and according to the Caltrans-approved Traffic Study Report (dated December 2, 2009), Build and No Build AADTs are the same.

Table 1. Roadway Segment Traffic Data for Opening Year 2014 – Build and No Build

Roadway Segment	Peak Hour	Traffic conditions				AADT		% Trucks
		No Build		Build		All	Trucks	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)			
SB SR 47 east of Harbor Boulevard on-ramp	AM	C	20.8	C	20.8	19,937	4,035	20%
	PM	C	18.7	C	18.7			
NB I-110 between John S. Gibson Boulevard off-and on-ramps	AM	C	18.9	C	18.9	31,666	3,530	11%
	PM	B	14.4	B	14.4			
NB I-110 north of John S. Gibson Boulevard on-ramp	AM	C	20.9	C	20.9	49,043	5,980	12%
	PM	B	16.9	B	16.9			
John S. Gibson Boulevard on-ramp to NB I-110 (merge)	AM	D	30.8	D	30.1	17,378	2,450	14%
	PM	C	27.9	C	26.5			
SR 47 SB weaving from Harbor Blvd. on-ramp to I-110 connector	AM	D	33.9	C	23.5	25,876	4,518	17%
	PM	C	23.9	B	17.6			
I-110 NB weaving segment from SR 47 connector to John S. Gibson Blvd. off-ramp	AM	C	30.6	B	21.3	33,069	3,774	11%
	PM	B	21.3	B	15.0			

NB: Northbound; SB: Southbound; SR: State Route

Improvements to no-build condition are shown in **bold**.

Source: Project Traffic Study Report (Iteris, 2009); Parsons, 2009.

RTP Horizon Year/ Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

The proposed project would not impact traffic volumes or mix, therefore, Build and No Build AADTs are the same.

Table 2. Roadway Segment Traffic Data for RTP Horizon Year 2035 – Build and No Build

Roadway Segment	Peak Hour	Traffic conditions				AADT		% Trucks
		No Build		Build		All	Trucks	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)			
SB SR 47 east of Harbor Boulevard on-ramp	AM	B	16.2	B	16.2	22,712	4,543	20%
	PM	C	21.6	C	21.6			
NB I-110 between John S. Gibson Boulevard off-and on-ramps	AM	C	19.8	C	19.8	41,814	4,025	10%
	PM	C	18.6	C	18.6			
NB I-110 north of John S. Gibson Boulevard on-ramp	AM	C	22.7	C	22.7	61,578	7,375	12%
	PM	C	20.7	C	20.7			
John S. Gibson Boulevard on-ramp to NB I-110 (merge)	AM	E	36.7	D	34.8	19,764	3,350	17%
	PM	D	31.4	D	29.7			
SR 47 SB weaving from Harbor Blvd. on-ramp to I-110 connector	AM	D	30.1	C	23.8	36,983	5,003	14%
	PM	E	36.2	C	27.7			
I-110 NB weaving segment from SR 47 connector to John S. Gibson Blvd. off-ramp	AM	D	33.2	B	23.0	43,775	4,309	10%
	PM	D	32.9	B	22.8			

NB: Northbound; SB: Southbound; SR: State Route

Improvements to no-build condition are shown in **bold**.

Source: Project Traffic Study Report (Iteris, 2009); Parsons, 2009.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

The project affects one intersection. Peak hour traffic data at this intersection is presented in Tables 3a and 3b.

Table 3a. Peak Hour Traffic Condition at Nearest Intersection, Existing Year and Opening Year 2014

Intersection	Peak Hour	Existing, Year 2008			Traffic Condition for Opening Year, 2014					
					No Build			Build		
		LOS	v/c	Delay/Vehicle	LOS	v/c	Delay/Vehicle	LOS	v/c	Delay/Vehicle
John S. Gibson Boulevard and I-110 NB Off-Ramp/Yang Ming Driveway	AM	B	0.66	19.7	C	0.86	29.4	C	0.79	34.5
	PM	B	0.46	16.4	C	0.85	28.3	C	0.78	32.8

Table 3b. Peak Hour Traffic Condition at Nearest Intersection, RTP Horizon Year 2035

Intersection	Peak Hour	Traffic Condition for RTP Horizon Year, 2035					
		No Build			Build		
		LOS	v/c	Delay/Vehicle	LOS	v/c	Delay/Vehicle
John S. Gibson Boulevard and I-110 NB Off-Ramp/Yang Ming Driveway	AM	D	0.99	51.5	D	0.92	44.3
	PM	D	1.00	49.1	D	0.95	39.1

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Presented above in Table 3b.

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

As discussed in Project Description section, the main purpose of the project is to provide improved traffic-operation and safety enhancement. The John S. Gibson Blvd off- and on-ramp improvements contribute to this purpose. While the off-ramp will remain a one-lane off ramp, the on-ramp will be realigned to provide a flatter profile and the 2nd on-ramp lane extended to accommodate slower moving trucks up the on-ramp grade. This will enhance safety and improve traffic operation, however, the traffic demand for the project corridor would not increase with the project, and as the Caltrans-approved project traffic study report shows Build and No-Build traffic volumes would remain the same.

Comments/Explanation/Details (attach additional sheets as necessary)

The John S. Gibson Blvd./I-110 Interchange Improvement Project will not alter local traffic patterns, nor will it affect diesel trucks traffic volume. The project traffic study, approved by Caltrans, shows that the proposed improvements would not be a traffic generator project and would not cause additional or redirect traffic flow. The additional lane proposed as part of the project improvements, extends past the freeway off ramp and merges with the mainline about 930 feet past the off ramp, and prior to the merging of the on-ramp. Though this may be considered “capacity enhancing” for a short segment within the project limits, the approved Caltrans Traffic Study shows Build and No-Build traffic volumes remaining the same. The traffic demand for the project area does not increase with the project. Furthermore, although the NB on-ramp is being slightly realigned and lengthened by about 500 feet, the entering vehicles will enter the freeway 500 feet farther down the freeway mainline, therefore the overall net increase or decrease of vehicle miles travelled will not change for a vehicle travelling from John S. Gibson Blvd north of I-110.

Based on the information provided above, the proposed project is not expected to introduce significant amount of diesel truck traffic, would not generate additional diesel truck traffic above levels anticipated without implementation of the project, and is in compliance with the SIP/RTIP. Therefore, the project qualifies for a finding of “Not POAQC” based on the definition contained in 40 CFR 93.123(b)(1).

Figure 1. Project Components

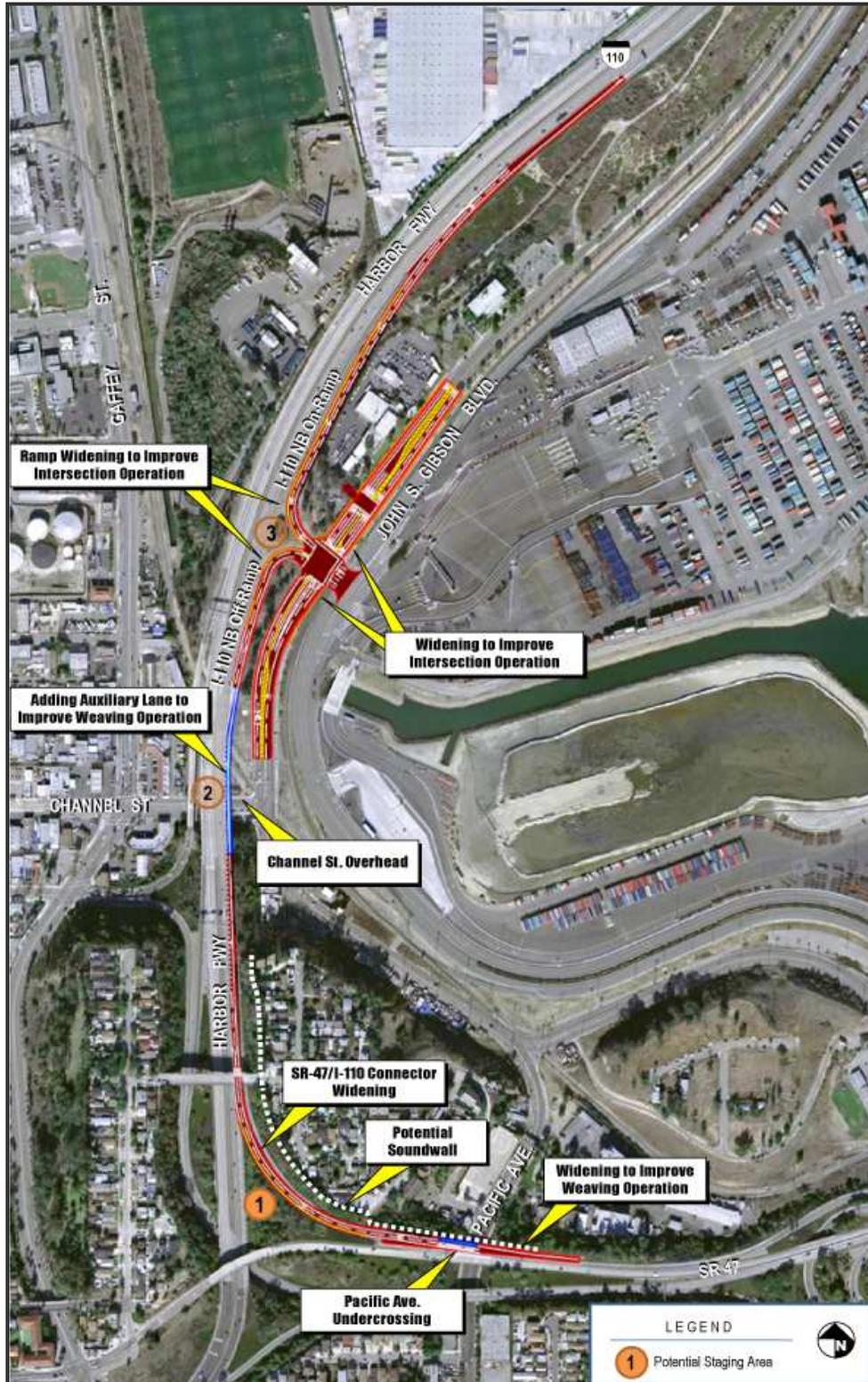
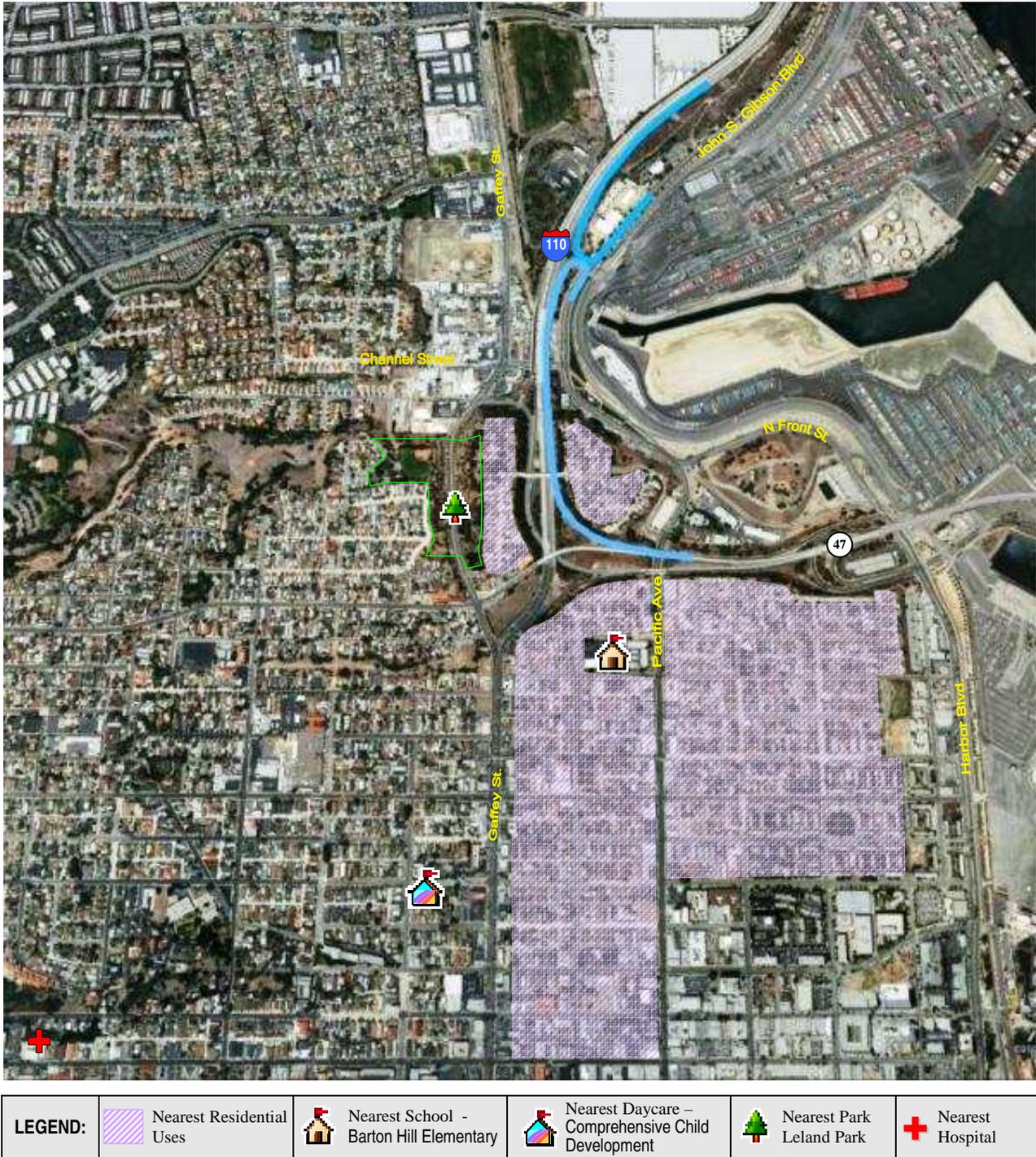


Figure 2. Sensitive Receptor Locations



Project in 2008 RTIP Project Listing



Project Listing
Final 2008 Regional Transportation Improvement Program – Los Angeles County
All

Cost in Thousands

Local Highway

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LAE0891	Los Angeles	SCAB		LAE0891	NCR31				L	EXEMPT	0	2008
							PTC		96	Agency		PICO RIVERA

ROSEMEAD BLVD/HWY 19 RENOVATION PROJECT - NON-CAPACITY

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			80	80		80						80
CITY FUNDS			16	16	13	3						16
LAE0891 Total			96	96	13	83						96

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA996340	Los Angeles	SCAB		LA996340	NCN31				L	NON-EXEMPT	0	2008
							PTC	47,983	Agency	POMONA		

MISSION BLVD. GRADE SEPARATION AT SR. 71(FROM UPRR UNDERCROSSING TO 9TH ST. MISSION BLVD FROM WESTERN TO CURRAN PLACE (CFP 6340, 8400).
PPNO 2232. SAFETEA-LU # 511 (PPNO 2232)

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			3,360	3,360	2,688	672						3,360
DEMO - TEA 21			1,250	1,250	1,250							1,250
STP LOCAL			4,884	4,884	4,884							4,884
CITY FUNDS			5,426	5,426	1,796	3,003	627					5,426
LOCAL TRANS FUNDS	1,747	4,627	7,197	13,571	13,571							13,571
PROP "C25" FUNDS			16,379	16,379	15,592	787						16,379
TRAFFIC CONGESTION RELIEF			3,113	3,113	2,326	787						3,113
LA996340 Total	1,747	4,627	41,609	47,983	42,107	5,249	627					47,983

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA0D390	Los Angeles	SCAB		LA0D390	CARH3				L	NON-EXEMPT	0	2008
							PTC	67,800	Agency	PORT OF LOS ANGELES		

THE PROJECT IMPROVES THE INTERSECTION AND I-110 ON/OFF-RAMPS AT JOHN S. GIBSON; AND ENHANCES THE OPERATION AND SAFETY OF THE I-110/SR 47/HARBOR BLVD INTERCHANGE CONNECTOR(SAFETEA-LU HPP # 2885. Addition of left and right turn lanes. Length of project - 1

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			4,000	4,000				4,000				4,000
PROP "C25" FUNDS			7,420	7,420				3,655	3,765			7,420
PORT FUNDS	1,000		15,332	16,332	500	500		7,666	7,666			16,332
LA0D390 Total	1,000		26,752	27,752	500	500		15,321	11,431			27,752

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA0F030	Los Angeles	SCAB		LA0F030	NCRH3				L	EXEMPT	0	2008
							PTC	24,798	Agency	PORT OF LOS ANGELES		

Project will improve flow of traffic from I-110 Fwy on/off-ramps at C Street by consolidating two closely spaced intersections into one.

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
PROP "C25" FUNDS			6,647	6,647				1,614	3,322	1,711		6,647
PORT FUNDS			15,151	15,151				5,652	3,944	5,555		15,151
LA0F030 Total			21,798	21,798				7,266	7,266	7,266		21,798

Appendix D Notice of Initiation of Studies (NOIS)
and Open House Invitation

NOTICE OF INITIATION OF STUDIES & OPEN HOUSE
City of Los Angeles, Los Angeles County, California

DATE: December 15, 2008

TO: Responsible Agencies, Review Agencies,
Trustee Agencies, and Individuals interested in the Project

FROM: Port of Los Angeles and California Department of Transportation

SUBJECT: John S. Gibson Boulevard/I-110 Freeway Access Ramp Improvements and SR 47/I-110 Northbound Connector Widening, Los Angeles County, California

This Notice of Initiation of Studies is to inform you that the Port of Los Angeles, in conjunction with Caltrans District 7, is proposing to improve the westbound SR 47/northbound I-110 connector and I-110 northbound ramps at John S. Gibson Boulevard. The proposed work includes widening the SR 47/I-110 connector from one to two lanes, which includes widening the Pacific Avenue overcrossing. The widening continues on the northbound I-110 by adding an auxiliary lane to the northbound off-ramp at John S. Gibson Boulevard, which includes the Channel Street Overcrossing. The on- and off-ramps at John S. Gibson Boulevard will be modified and widened. The project also includes widening intersection of John S. Gibson Boulevard and the freeway ramps. In addition to the roadway improvements, the existing drainage system would be improved.

The proposed project is a joint project by Caltrans in cooperation with the Port of Los Angeles and the Federal Highway Administration (FHWA), and it is subject to state and federal environmental review requirements. A combined Initial Study (IS)/Environmental Assessment (EA) will be prepared for the project, pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327. Caltrans is the lead agency under CEQA and NEPA. Your participation as an interested party is requested in the preparation and review of this document.

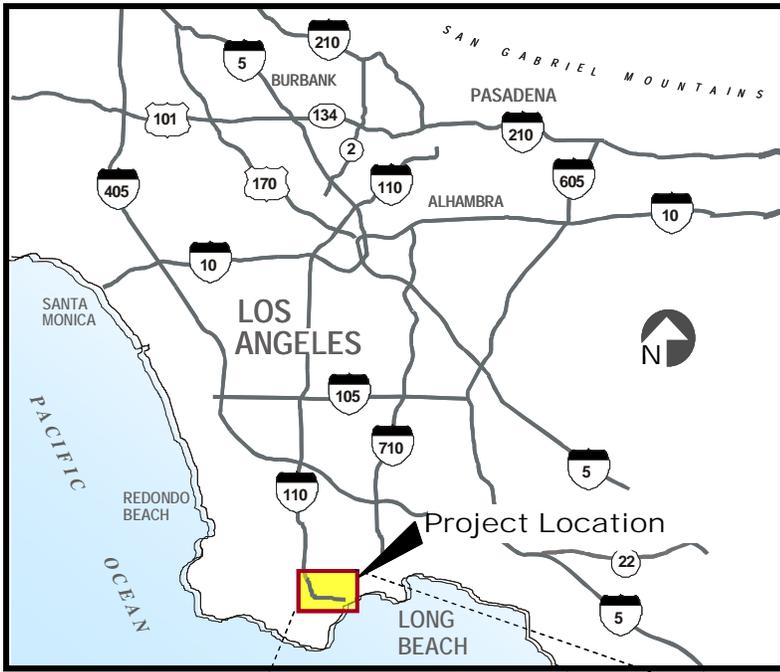
This notice is to inform you that the environmental document will analyze factors that include, but are not limited to, aesthetics, air quality, biological resources, community impacts, cultural resources, hazardous wastes and materials, hydrology, water quality and floodplain, land use planning, noise, and transportation/traffic.

We welcome your input on this project. Please provide any comments or suggestions that you may have concerning alternatives to be studied or potential social, economic, or environmental impacts resulting from the project. To provide you with more information and assist your review of this proposed project, the Port of Los Angeles and Caltrans will hold an Open House on January 7, 2009, from 6:30 p.m. to 8:00 p.m. at the Bannings Landing Community Center, located at 100 E. Water Street, Wilmington, CA 90744.

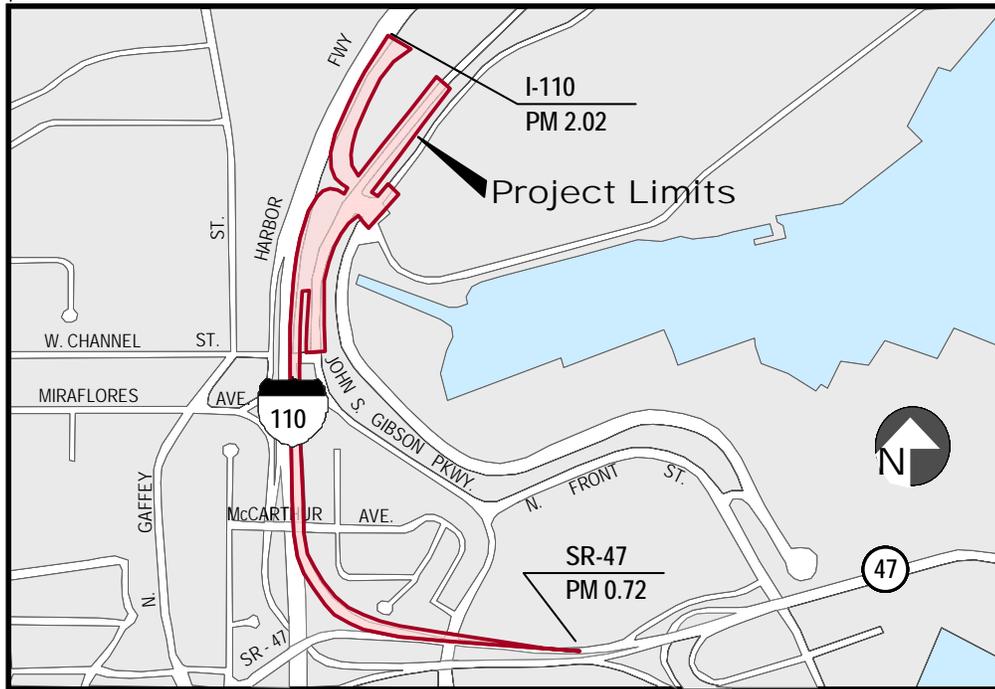
Submit your comments, questions, and contact information by January 15, 2009. Comments may be submitted by mail to Eric Dietrich, Environmental Planner, Caltrans District 7, or in person at 100 South Main Street, Los Angeles, CA 90012.

If you have any questions, please contact Eric Dietrich, Environmental Planner, Caltrans District 7, at (213) 897-2824 or Prashant Konareddy, Port of Los Angeles, at (310) 732-3362.

We look forward to your ongoing participation on this project.



Location Map



Vicinity Map

Figure 1 Project Location & Vicinity Maps

John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
Environmental Document Distribution List (Federal)

U.S. Senate
The Honorable Barbara Boxer
312 N. Spring Street, Suite 1748
Los Angeles, CA 90012

U.S. Senate
Office of Senator Feinstein
Trevor Daley, Senior Field Representative
11111 Santa Monica Blvd., #915
Los Angeles, CA 90025

U.S. Congress District 33
The Honorable Lucille Roybal-Allard
255 E. Temple St., Ste. 1860
Los Angeles, CA 90012-3334

U.S. Congress District 30
The Honorable Xavier Becerra
1910 Sunset Blvd., Suite 560
Los Angeles, CA 90026

U.S. Army Corps of Engineers
District Engineer
911 Wilshire Blvd.
Los Angeles, CA 90017

U.S. Fish and Wildlife Service
Environmental Review Section
2730 Loker Avenue West
Carlsbad, CA 92008

U.S. Federal Emergency Management Agency
Regional Director
1111 Broadway, Suite 1200
Oakland, CA 94607

U.S. Environmental Protection Agency Region 9
Office of Planning and Public Affairs
Environmental Review Section
75 Hawthorne Street
San Francisco, CA 94105

U.S. Department of Transportation
Federal Highway Administration, Region 9
Environmental Review Section
201 Mission Street, Suite 2210
San Francisco, CA 94105

U.S. Department of Transportation
Federal Highway Administration
Office of Policy and Plans
Environmental Review Section
400 7th Street, S.W.
Washington, D.C. 20590

Federal Highway Administration
Steve Healow, Senior Project Development Engineer
650 Capital Mall
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Sacramento, CA 95814-4708

Native American Tribal Councils
Mr. Martin Alcala
P.O. Box 9090
Marina Del Rey, CA 90292

Department of Housing and Urban Development
Los Angeles Field Office
CPD Field Office Director
William Vasquez
611 W. 6th Street, Suite 800
Los Angeles, CA 90017

U. S. Department of Energy
Environmental Review Section
1000 Independence Ave., SW 4G-064
Washington, DC, 20585

John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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U.S. Department of Interior
Environmental Review Section
1849 C Street, NW
Main Interior Building Rm. 2340
Washington, D.C., 20240

U. S. Department of Agriculture
Environmental Review Section
1400 Independence Ave., SW
Washington, DC 20250

U.S. Department of Commerce
Environmental Review Section
14th & Constitution NW, Room 6800
Washington, DC, 20230

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San Francisco, CA 94105-390

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1314 Second Street
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U.S. Fish and Wildlife Service
Field Supervisor
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Carlsbad, CA 92009

U.S. National Marine Fisheries Service
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Long Beach, CA 90802-4221

U.S. Department of Transportation
Raymond Barberesi
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MAR -830 Room 7201C

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Planning Division
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Los Angeles, CA 90017

U.S. Army Corps of Engineers
Steve Dwyer
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U.S. Army Corps of Engineers
Theresa Kapalan
915 Wilshire Blvd.
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Los Angeles, CA 90017

U.S. Coast Guard
Captain of the Port, Sector Los Angeles
1001 Seaside Ave. Bldg. 20
San Pedro, CA 90731

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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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The Honorable Jenny Oropeza
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Redondo Beach, CA 90278

California State Senate District 55
The Honorable Laura Richardson
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Suite 327
Long Beach, CA 90807

Office of the Attorney General
Attorney General's Office California Department of Justice
Attn: Public Inquiry Unit
P.O. Box 944255
Sacramento, CA 94244-2550

California Air Resources Board
Environmental Review Section
1001 "I" Street
P.O. Box 2815
Sacramento, CA 95812

California Highway Patrol (West Los Angeles)
Officer Leland Tang
6300 Bristol Parkway
Culver City, CA 90230

California Highway Patrol
Captain Steve Badilla
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Woodland Hills, CA 91367

State Clearinghouse Office of Planning & Research
Director
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Sacramento, CA 95812-3044

State of California Resources Agency
Environmental Review Section
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Sacramento, CA 95814

California Department of Transportation
District 7, Regional Planning
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Los Angeles, CA 90012

California Regional Water Quality Control Board-
Los Angeles Region
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California Department of Fish and Game
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Ojai, CA 93023

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California Department of Transportation, Headquarters
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Sacramento, CA 95816

California Native American Heritage Commission
Executive Secretary Larry Myers
915 Capitol Mall, Room 364
Sacramento, CA 95814

John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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Office of Historic Preservation
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California Coastal Commission
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Sacramento, CA 95812

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California State Lands Commission
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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Los Angeles County Board of Supervisors
Zev Yaroslavsky, 3rd District Chairman
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Los Angeles County Board of Supervisors
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Los Angeles, CA 90012

Los Angeles County Clerk
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Norwalk, CA 90650

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Susan Nissman Policy Deputy
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Los Angeles, CA 90012

County of Los Angeles
Department of Public Works
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Alhambra, CA 91803-1331

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15th District, Los Angeles City Council
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Councilwoman Janice Hahn
15th District, City of Los Angeles
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Southern California Associations of Government
Environmental Document Review Section
818 West Seventh Street 12th Floor
Los Angeles, CA 90017-3435

Sierra Club
Ron Silverman, Director
3435 Wilshire Blvd., Suite 320
Los Angeles, CA 90010

South Bay Cities Council of Governments
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Los Angeles, CA 90017

South Coast Air Quality Management District
Steve Smith, Program Supervisor, CEQA Section
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
Environmental Document Distribution List (Regional and Local)

County of Los Angeles Department of Regional Planning
Bruce McClendon, Planning Director
Hall of Records (13th Floor)
320 West Temple Street
Los Angeles, CA 90012

County of Los Angeles Metropolitan Transportation Authority
Chief Planning Officer
1 Gateway Plaza Mail Stop: 99-22-1
Los Angeles, CA 90012-2932

City of Los Angeles
The Honorable Mayor Antonio Villaraigosa
200 N. Spring Street, Rm. 303
Los Angeles, CA 90012

City of Los Angeles
Planning Department
S. Gail Goldberg, Planning Director
200 North Main Street
Los Angeles, CA 90012

City of Los Angeles Department of Transportation
Transportation Planning Department
100. S. Main Street
Los Angeles, CA 90012

City of Los Angeles
Bureau of Engineering
Dr. Ara Kasparian, Environmental Affairs Manager
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Los Angeles, CA 90015

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Office of the Superintendent
333. S. Beaudry Ave., 24th Floor
Los Angeles, CA 90017

Barton Hill Elementary School
423 North Pacific Avenue
San Pedro, CA 90731

Bandini Street Elementary School
425 N Bandini St
San Pedro, CA 90731

Harbor Occupational Center
740 N Pacific Ave
San Pedro, CA 90731

Harbor Community Adult School
950 W Santa Cruz St
San Pedro, CA 90731

Los Angeles Fire Department
Fire Station 112
444 South Harbor Boulevard, Berth 86
San Pedro CA 90731-3333

Harbor Community Police Station
221 North Bayview Ave.
Wilmington, CA 90744

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Long Beach, CA 90802

L.A. City Library Department
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Los Angeles, CA 90071

L.A. City Library Department, San Pedro Branch
Head Librarian
931 South Gaffey Street
San Pedro, CA 90731

L.A. City Library Department, Wilmington Branch
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Coalition for Clean Air
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Los Angeles City Clerk's Office
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Past EIR Subcommittee
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Port Community Advisory Committee
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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South Coast Air Quality Management District
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Heal the Bay
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Pacific Maritime Shipping Association
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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Vitaly Troyan
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Port of Long Beach
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San Pedro Chamber of Commerce
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Jodean Giese
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Environmental Affairs Department
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City of Rancho Palos Verdes
Joel Rojas
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Rancho Palos Verdes, CA 90275

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John Standiford
P.O. Box 12008
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Riverside, CA 92502-2208

Best Best & Krieger LLP
Steven DeBaun
3750 University Avenue, Suite 400
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92501

John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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John S. Gibson Boulevard/I-110 Access Ramps and SR 47/I-110 Connector Improvements Project
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Carson, CA 90745

Transportation Projects Open House

Casa Abierta de Proyectos de Transportación



The Port of Los Angeles together with Caltrans, District 7, welcome you to our Open House for the Transportation Projects

- ♦ C Street/I-110 Access Road Improvements
- ♦ John S. Gibson Boulevard/I-110 Access Ramps Improvements & SR-47/I-110 Northbound Connector Widening

Wednesday, January 7, 2009—Banning's Landing Community Center
6:30 - 8:00 p.m.

Welcome!

This evening you have an opportunity to see updated concepts that have been developed to improve transportation in and around the I-110 Freeway and its connectors.

Please use this program as a guide to the evening's activities. We encourage you to use this when you visit the Project Stations.

Thank you for your participation in this process!

El Puerto de Los Angeles, junto con el Distrito 7 de Caltrans te saluda a venir a la Casa Abierta de los Proyectos de Trasportación

Miércoles , 7 de Enero de 2009 —Banning's Landing Community Center
6:30 - 8:00 p.m.

¡Bienvenidos!

Esta noche usted tiene la oportunidad de ver las ideas que se desarrollaron para mejorar la movilidad en y alrededor de la autopista I-110 y sus conectores.

Por favor use este programa como una guía para las actividades de esta noche. Los animamos que use este programa cuando visiten las estaciones de proyectos.

Gracias por su participación en este proceso!



John S Gibson Blvd Intersection & NB I-110 Ramp Access Improvements

Features

- ◆ Extends existing 2-lane NB I-110 onramp 500 feet
- ◆ Provides widening of exclusive EB right turn lane at the intersection to accommodate truck turns
- ◆ Provides SB and NB dual left lanes at the intersection
- ◆ Provides NB exclusive right turn lane into terminal
- ◆ Widens and improves terminal driveway to facilitate truck moves to/from freeway ramps
- ◆ Traffic signal improvements

Características

- ◆ Extiende la rampa de ingreso hacia la autopista I-110 Norte por 500 pies
- ◆ Provee ampliar carril exclusivo para doblar hacia mano derecha en la intersección para acomodar movimientos de camiones
- ◆ Provee dos carriles para doblar hacia la izquierda en el sur y el norte de la intersección
- ◆ Provee un carril exclusivo para tráfico yendo hacia el norte para hacer vueltas a la derecha hacia la terminal
- ◆ Ampliación y mejoramiento de la entrada de carros para facilitar movimiento de camiones al entrar y salir de la autopista
- ◆ Mejoramiento de semáforos de tráfico



Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!

For additional information please contact:
Prashant Konareddy
Civil Engineer Associate III
(310) 732-3362
Or visit the website:
www.portofla.org

Para mas información por favor comuníquese:
Prashant Konareddy
Civil Engineer Associate III
(310) 732-3362
O visite el pagina web:
www.portofla.org



WB SR 47 & NB I-110 Connector



Features

- ◆ Widen existing single lane connector to a dual lane connector
- ◆ Widens the existing John S. Gibson exit from a single-lane to a dual-lane exit
- ◆ Minimizes weaving between Front St on-ramp traffic and bridge traffic from Long Beach

Características

- ◆ Ampliar el conector de un carril a un conector de dos carriles
- ◆ Ampliar la rampa de salida en John S Gibson de un carril a dos carriles
- ◆ Minimiza conflictos entre tráfico utilizando la rampa de ingreso en Front St. y tráfico del Puente desde Long Beach

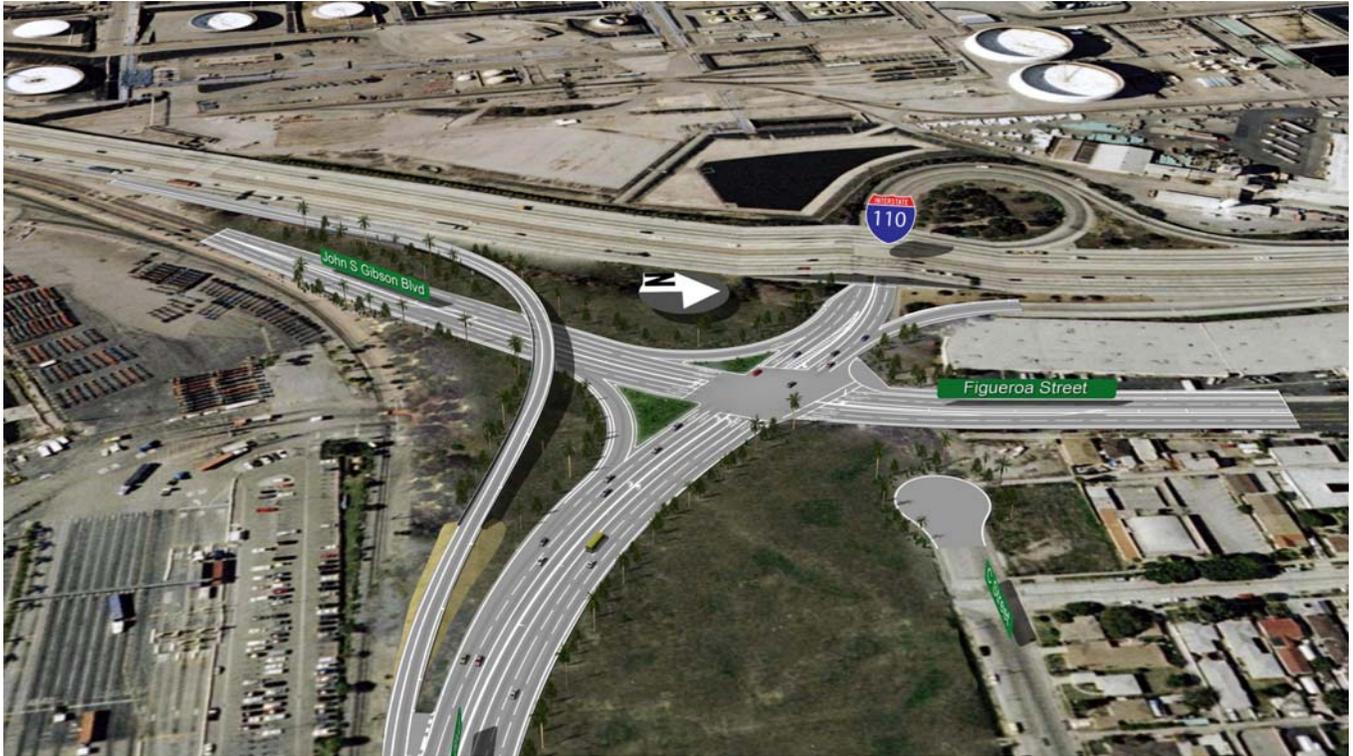
Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!

For additional information please contact:
Prashant Konareddy
Civil Engineer Associate III
(310) 732-3362
Or visit the website:
:www.portofla.org

Para mas información por favor comuníquese:
Prashant Konareddy
Civil Engineer Associate III
(310) 732-3362
O visite el pagina web:
www.portofla.org



I-110/"C" Street Interchange Improvements



Features

- ◆ Replace two intersections with one:
 - ◆ C St and Figueroa St
 - ◆ John S Gibson Blvd and Harry Bridges Blvd
- ◆ Construct a "free" right turn from the I-110 off-ramps
- ◆ Construct a cul-de-sac at "C" St and Figueroa Street
- ◆ Construct dual left turn lanes from WB Harry Bridges Blvd to SB John S Gibson Blvd
- ◆ Construct a new fly-over from NB I-110 to NB Figueroa St

Características

- ◆ Sustituye dos intersecciones con una:
 - ◆ C Street y Figueroa Street
 - ◆ John S Gibson Blvd y Harry Bridges Blvd
- ◆ Construir dos carriles para doblar hacia mano derecha para librar trafico para el salida de la autopista I-110
- ◆ Construir un callejón sin salida a C Street y Figueroa Street
- ◆ Construir dos carriles para doblar hacia mano izquierda desde Harry Bridges Blvd hacia el oeste a John S Gibson Blvd hacia el sur

Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!.

For additional information please contact:

Mimi Gutierrez
Civil Engineer Associate II
(310) 732-3339
Or visit the website:
www.portofla.org

Para mas información por favor comuníquese:

Mimi Gutierrez
Civil Engineer Associate II
(310) 732-3339
O visite el pagina web:
www.portofla.org



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Osgood Sargeant	571 W. 17 th St	San Pedro Ca	562 833- 9474	osgoodsgte gmail.com	San Pedro Skate Park, Association (501c3 Non Profit)
CARRIE SCOVILLE	415 W. CLARKSON	SP CA	310- 832-9622	CARRIE SCOVILLE @44444.COM	CENTRAL SP NEIGHBORHOOD COUNCIL
Tyler Dartge		Torrance, Ca	(310) 465-7935		San Pedro Skis park Association
Transitions Skateshop	23642 Main St	Carson	(310) 518-5298		San Pedro Skis park Association
Sunken City Skateshop	619 S Mesa St	San Pedro	(310) 833-6678		San Pedro Skis park Association
Geoff Scofield		Orange County	(714) 745-8996		San Pedro Skatepark Association



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
AGATA GOTFRYD	571 W 17th St. SAN PEDRO	SAN PEDRO 90731		AGOTFRYD@GMAIL.COM	SAN PEDRO SKATE PARK ASSOCIATION
JESSE RIMOLDI	530 N. PALOS VERDES ST	San Pedro 90131			San Pedro Skate Park Association
Ana Dragin	CD 15				
Raymundo & Maria Garibay	1319 W Robidoux st wilmington, ca.	—			
Allen Glasco	4252 Palmdale Blvd	LA CA 90008	323-702-0602	allenglasco@yahoo.com	San Pedro Skate Park Association
Tyler Mamma		Dana Point	(949) 295-8312		San Pedro Skate park Association



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Steven Laolagi	862 W. 30th St	San Pedro 90731	(310) 857-8461		San Pedro Skatepark Association
Kirk Jandle	938 CRISTOBAL	Wilmington	310 830 3842		BLVD Blacksmith & Welding Works Inc
Donna Schuyton	Beith 203 #9	Wilmington 90744	310 549-8111	rayprosvs@earthlink.net	Wilmington Boat Owners PCYC WVA
Alexander Wilkerson	1080 Via Cordova	San Pedro 90732	310-832- 1809		San Pedro SKS Park Association
Josh Sandoval		Fullerton	(714) 227- 6308		San Pedro SKS Park Association
Vincent Vegas		San Pedro	(310) 918- 3179		San Pedro SKS Park Association



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
John Hargrave	1021 W 36 th St	San Pedro 90731	310 567 8677	—	SPSA San Pedro Skate Park Association
Cesar Rimoldi	530 N. PALOS VERDES Street	San Pedro 90731	(310) 548 0224	—	San Pedro Skatepark Association
Derek Laolagi	862 W. 30 th St	San Pedro 90731	(310) 579- 7669	—	San Pedro Skatepark Association
Ray Zimmerman		Long Beach		MRZ photo @mindspring.com	San Pedro Skatepark Association
Wallace Hampton		Long Beach		GSXRXTL@ yahoo.com	San Pedro Skatepark Association
Matthew Johnson		Long Beach		mjohnson@ americanclean stat.com	San Pedro Skatepark Association!
Chris Wilkerson	1080 Via Cordova	San Pedro 90732	310-832- 1809		San Pedro SKSPark Association



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
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BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
CECILIA MORA	613 N. Olive Ave	Wilmington 90744	(310) 489-3197	None	Coalition for San Pedro Environment
PAT ROME	25327 Pine Creek Lane	Wilm. 90744	(310) 952-0533	PJWRome@yahoo	Resident
Michelle Biguardi	827 Eastman	SP, 90731			
Josh Wilkerson				xlapo@hotmail.com	San Pedro Skatepark Association
Will Taylor	571 W 17th St San Pedro 90701			wz.taylor@gmail.com	San Pedro Skatepark Asso.
Guillermo Jaimes	5610 Pacific Blvd #203 Huntington Beach	Huntington Park 90255	(327) 526 526-9771 x114	gjjaimes@cbecel.org	Committee for a Better Environment
Lori Gastelum	1065 Eubank Wilm.	90744	310 790-3027	lori.gastelum@yahoo.com	Community member



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
JESSE N. MARQUEZ	P.O. BOX 118	WILMINGTON 90744	710-834-1128	JN.MARQUEZ@PRODIGY.NET	COALITION FOR A SAFE ENVIRONMENT
Joel Thurwachter	3311 W. Ball Rd Anaheim CA 92801	Anaheim 92804	714-827-2591		IGOE 12.
Bianca Villanueva	3711 Long Beach Blvd #801	LB 90807	562/997-0798	bianca.villanueva@asm.ca.gov	Bonnie Lowenthal's Office, Dist 54.
Scott Minton	370 WISCONSIN UNIT 306	LONG BEACH 90814	(215) 688-3666	mintonphoto@gmail.com	SAN PEDRO SKATEPARK ASSOCIATION
TRACEY ZUCIANI	POLCA 425 S. Pacific Coast St	SAN PEDRO CA		tzuciani@post.ing	POLCA
Phil Nicolay	NEWSPAC 877 EASTMAN PL SAN PEDRO, CA 90773			Philip.Nicolay@ARCADIS-USA.COM	NEWSPAC
Kenneth Keener	1229 W. ALTON ST.	WILMINGTON 90744	310-834-2331	KenKeener@901.com	Resident



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
April Casillas	100 Laverne Ave. 622009000	LA, 90803		aprilcasillas@yahoo	SPSA
Mark BIALORUCKI	1203 W 'C' ST	Wilmington 90744			
ELIZABETH WARREN	Berth 77, P 7A Ports O Call	San Pedro 90731	310-982-1323	ewarren@futureports.org	FuturePorts
Ken Fredrickson	915 3 Wilshire Blvd.	LA 90017	69-694-2910	Ken-fredrickson@urcorp.com	URS
Jeanne Lacombe	2052 Galvita	RPV 90275		chateau405@earthlink.net	Rolling Hills Riviera HOA
Gloria Kong	425 S. Sepulveda Chino Hills CA	9070	310-752-3865	gloria@people.com	Port
DILIP MALAVE	400 OLEANWAY LB, CA 90802	90802		dml@iterid.us	ITERIS.



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
RINGOR, ROLANDO	853 W 17th St SAN PED	San Pedro	310-548-8178		
Bonnie Markle	957 S. Village Oaks Drive	COVINA	626-967-1510	Bonnie@ mbimedia. com	mbi media
Connie Riven					ACTA
Rob O'CONNELL	707 30th ST APT #1	SAN PEDRO 90731	310 4202980	JUANROBERT2001 @Yahoo	S.P.S.A
Alan C. Velasco	32535 Pacific Ave S.P.CA	S.P.CA	310 9223046	AlanVelasco @Yahoo	S.P.S.A.
Michael Richardson	3916 E. 2ND ST LONG BEACH CA 90803	LONG BEACH 90803	(562) 370 6564	RICHARDSON MBO @YAHOO.COM	S.P.S.A.
Frank B. Anderson	515 North Meyler St.	San Pedro 90731-1846	310 8339113	Fbmi@tampol.com	Central S.P. Neigh Council



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Kathy D'Antonio					Laborer's Local 802
Joseph Jakel	106 LaVerne	Long Beach	562-434-9584	jjakel@BCconsultants.com	SPSA
Elvis Sogard	44 E 3rd St 3834 #7	Long Beach		elvisdesigns@yahoo.com	SPSA
Sofia Carrillo	521 N. Avalon #105	Wilmingon CA 90744	310)493-8999	sofiacarrillo@bcglb.net	coalition FOR A SAFE ENVIRONMENT C.F.A.S.E
BRIAN VENTIC	1632 BAY VIEW	WILMINGTON	3104002396	BVENTIC@PALBEEL.NET	RESIDENT
Peter Lacombe	2052 Galena RPV 90275		910-833 0443	chateau4us @earthlink.net	Rolling Hills Riviera HOA
Kerri Cacciatto	370 Wisconsin #306	Long Beach Ca 9084		kcacciatto @cuhmc.com	SPSA
Brian Minshew	4201 Long Beach #317	Long Beach 90807	562-989-7919	Brianminshew @asm.ca.gov	ASM Furutani



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Dianne Kelly	4255 Palos Verdes San Pedro	San Pedro 90731	310 732-3500	Skelly@ Portla.org	Port Police
FRANK HERRERA	2000 G-	Wilme 90744	310 835-1192		LIOMS.
ALAN HICKS	501 W CEMHBL LONG BEACH	90802	202 510 8771	alan.hicks@ dot.gov	Maritime Administration
Leslie Provenzano	100 W Walnut Pasadena, CA	91124	626 440 6237	LA l9pro@yahoo.com	
GARY YOUNG	1916 MARINA DR	SP. 90732	310 8323907		PILE DRIVERS UNION
ROBERT YAMASHITA	3914 E 2nd	LB. 90803	210 863-0162	rfyamashita@yahoo.com	S.P.S.A.
Jodi Ford	724 N. GAFFERI	SAN PEDRO 90731	(310) 7076507		



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements



BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Bill Orton	State Senator Roderick Wright's office			william.orton @sen.ca.gov	Please email Power Point + Notes. *
TOMMY RINGO	2922 S - ALMA -	90231			DS YES
DON FERRARA	6301 VIA CIEGA PRV CA 90275	90275	310 548-6505		M-1 PROPERTY OWNER 517427 NORTH FIBER OA
JOSE ALVAREZ	425 S. PALOS VERDES SAN PEDRO CA	90731	310-732 2646	JALVAREZ@PORTLA. ORG	LA PORT POLICE COMMUNITY RELATIONS OFFICER
CHARLIE RICO	519 WEST "D" ST. WILMINGTON CA.	WILMINGTON CA 90744	(310) 834 5689		WILMINGTON HIONS
Jose Becena	1169 1/2 North Fries Ave	Wilmington 90744	(310) 834-4234		Wilmington Resident
ANDY HARRIS	1041 17th ST SP, CA 90731	SAN PEDRO	310 751-1394	SAN PEDRO SKATEPARK ASSOCIATION. ORG	SPSA



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
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BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Josh Brooks	1922 E. 4th St Long Beach	Long Beach 90802	608- 334-9237	jushingb @gmail.com	espn.com
ANA GOVORCIN	623 W. 22ND ST #4 SAN PEDRO, CA 90731		(310) 941 8986	anasmotana @yahoo.com	
Byron Ford	724 N Gaffey Pl SAN PEDRO, CA 90731		310 8329649		
Debbie Baker	540 N. MARINE AVE WILMINGTON, CA 90744		(310) 834-5233	DBaker @ LIUNA 802.org	Laborers Local 812
Lois Watts	8133 Boronia St	509100	310 570722	125752, Lois@... .com	L... ..
Aida Torres Angel Torres	1306 W. Ender St. Wilm. Ca 90744		310) 835-7742		
John Mavar	820 S WALKER SP 90731		310 344 0023	Johnmmavar @AOL	Northwest SP NC

DEPARTMENT OF TRANSPORTATION

DISTRICT 7 - 100 S. MAIN STREET
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0686
TTY (213) 897-4937



*Flex your power!
Be energy efficient!*

April 19, 2010

Name

Address

San Pedro, CA 90731

File No.: EA 26060K

SUBJECT: PROPOSED SOUNDWALLS ADJACENT TO SR 47/I-110 CONNECTOR

Please be advised that Caltrans is preparing the Initial Study/Environmental Assessment (IS/EA) for the Port of Los Angeles' John S. Gibson and State Route (SR) 47/Interstate 110 (I-110) Connector Improvements Project. This study analyzes environmental impacts associated with the proposed project.

A Noise Study Report in accordance with the current Caltrans protocol was completed for the IS/EA which recommended noise abatement for your community based on the existing freeway traffic noise impacts and the proposed BUILD alternative. The study determined that noise barriers (or soundwalls) between 8 and 14 feet (ft) in height would be effective and could be reasonably built within the freeway right-of-way (ROW) along the existing property line of each residence with the exception of one property where the proposed barrier would have to be located within private property.

Noise levels within the proposed project were determined to be in the range of 67-72 A-weighted decibel (dBA) Leq(h). The proposed soundwalls were determined to provide the minimum required 5 dB noise reduction for the impacted receivers. The IS/EA also analyzed visual impacts associated with the proposed soundwalls and determined that the proposed soundwalls may result in an adverse visual impact to the existing view which would result in conflicting impacts. Therefore, we are contacting you to assist us in finding a remedy to this situation.

Some residents have verbally expressed their opposition to a soundwall that may be 8-ft to 14-ft high and would adversely impact their views. According to state and federal policies, Caltrans will not construct soundwalls if more than 50 percent of the affected property owners do not want them. Therefore, we are sending you the attached survey form in an effort to identify and document those affected property owners who do not want soundwalls. An affected property owner is the registered owner(s) of the property where soundwall will be constructed adjacent to their property.

As part of this effort, Caltrans and the Port of Los Angeles will host a focus meeting on Wednesday, May 12, 2010 at Port of Los Angeles Board Room, 2nd floor, 425 S. Palos Verdes Street, San Pedro, CA 90731, from 6:00 pm to 8:00 pm, to provide all affected property owners with the information about the proposed soundwalls. Our technical specialists will be present to answer your questions pertinent to the proposed soundwalls.

The attached survey form provides options made available by Caltrans for you to consider regarding the proposed soundwall affecting your property. The attached aerial map shows the proposed soundwall locations. The survey form will also be available at the focus meeting on May 12, 2010. You are requested to send back the response form by **May 21, 2010** to **Eric Dietrich, Environmental Planner, California Department of Transportation District 7, 100 S. Main Street, Los Angeles, CA 90012-3606**. Alternatively, you can turn in the survey form at the Focus Meeting. As soon as the responses have been received, Caltrans will make a decision regarding construction of soundwalls based upon the majority response received from the affected homeowners.

For any further questions or concerns, please contact Eric Dietrich at (213) 897-2824 or email: eric_dietrich@dot.ca.gov.

Thank you for your interest in this transportation project.

Sincerely,

KARL PRICE
Office Chief
Environmental Planning

SOUNDWALL SURVEY RESPONSE FORM

Please indicate your opinion regarding the proposed soundwall below, complete the survey by including your name, address, signature, and date, and return the form in the envelope provided. It is important that we receive a response from each affected property owner by **MAY 21, 2010**. Thank you for your participation.

Survey forms which are not returned by May 21, 2010 will be interpreted by Caltrans as a vote in agreement for the installation of soundwalls at the specified locations.

- I agree to have a soundwall (masonry) up to 14-ft high installed at my property to abate noise.
- I agree to have no soundwall.

Comments:

Property Owner's Name _____

Property Address _____

Signature _____ Date _____

Mail Response to:
Eric Dietrich, Environmental Planner
California Department of Transportation
District 7 MS 16A
Division of Environmental Planning
100 South Main Street
Los Angeles, CA 90012
Tel: (213) 897-2824
Fax: (213) 897-2593



JOHN S. GIBSON BLVD/I-110 FREEWAY ACCESS RAMP
IMPROVEMENTS & SR-47/I-110 NORTHBOUND CONNECTOR
WIDENING

SOUNDWALL FOCUS MEETING

May 12, 2010

6:00-8:00 PM

Port of Los Angeles, 2nd Floor Board Room
425 S. Palos Verdes Street, San Pedro

AGENDA

- | | |
|-------------------|---|
| 6:00 pm – 6:30 pm | Sign-In and Exhibit Viewing |
| 6:30 pm – 6:50 pm | Presentations |
| 6:50 pm – 7:10 pm | Break-out Groups – Exhibit Viewing |
| 7:10 pm – 7:40 pm | Questions & Answers pertaining to Soundwall |

Note: Ballots can be casted today (your ID Card is required).

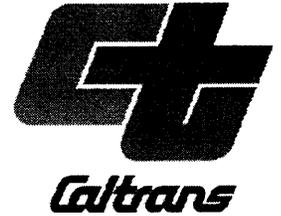
Duplicated ballots will be verified with the property owner and will be counted only once.

Ballots can be mailed at a later date, but no later than May 21, 2010.

Only registered property owners can cast the ballot. Tenants cannot.



PORT OF LOS ANGELES & CALTRANS
John S. Gibson Project Soundwall Focus Meeting



Port of Los Angeles
 Wednesday May 12, 2010

Name	Address	City & Zip	Phone	Email	Organization
✓ Karen Kinsley	642 W Oliver	S.P. 90731	310 - 5479538	KarenKinsley@att.net	Self
✓ NELSON Carrasquillo	916 N. Gaffey PL	S. P.	(310) 218-6051	not listed Nutritionalbiz@aol.com	Self
✓ Gerald Nyhus	682 W. MACARTHUR	S. P.	(310) 8330109		Self
✓ Richard DAVIS	928 N. Gaffey Pl.	S. P.	(310) 548-8551		4
✓ SHANNON Nyhus	682 W. MCARTHUR AVE.	SAN PEDRO 90731	(310) 8330109		SELF
✓ JOAQUIN SAMANIEGO	648 W OLIVER ST	SAN PEDRO 90731	310 8310101		SELF
✓ Alberto Cabello	643 W OLIVER ST	SAN PEDRO 90731	310 5473079		SELF



PORT OF LOS ANGELES & CALTRANS
John S. Gibson Project Soundwall Focus Meeting



Port of Los Angeles
Wednesday May 12, 2010

Name	Address	City & Zip	Phone	Email	Organization
✓ Ramon Samaniego	663 W. OLIVERA	San Pedro Ca.	310 5474768		HOME OWNER House
✓ Jack Ford	724 N GERRIT PI.	San Pedro	(310) 97076507		HOME OWNER
✓ CON JOHANNA	525 N GERRIT	40731	40 548-4327		HD
Mimi					



PORT OF LOS ANGELES & CALTRANS
John S. Gibson Project Soundwall Focus Meeting



Port of Los Angeles
 Wednesday May 12, 2010

Name	Address	City & Zip	Phone	Email	Organization
✓ Darlene Persinger	16701 Mt. Carmel Cr	Fontana Valley Ca 92708	714 839 9004	Cred legal @ Caltrans	Home Owner House 679 W. Oliver Street
✓ Lois Romero	679 W Oliver St	San Pedro	310 519 3561		Renting
✓ Kimberly Garcia	679 W Oliver St	SAN PEDRO	310 519 3561		RENTING
✓ Byron Foss	724 N Gaffey Pl	San Pedro			

DEPARTMENT OF TRANSPORTATION

DISTRICT 7 - 100 S. MAIN STREET
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0686
TTY (213) 897-4937



*Flex your power!
Be energy efficient!*

April 20, 2010

**SECOND NOTICE
DEADLINE EXTENDED TO
May 28, 2010**

Name
Address
San Pedro, CA 90731

File No.: EA 26060K

SUBJECT: PROPOSED SOUNDWALLS ADJACENT TO SR 47/I-110 CONNECTOR

Please be advised that Caltrans is preparing the Initial Study/Environmental Assessment (IS/EA) for the Port of Los Angeles' John S. Gibson and State Route (SR) 47/Interstate 110 (I-110) Connector Improvements Project. This study analyzes environmental impacts associated with the proposed project.

A Noise Study Report in accordance with the current Caltrans protocol was completed for the IS/EA which recommended noise abatement for your community based on the existing freeway traffic noise impacts and the proposed BUILD alternative. The study determined that noise barriers (or soundwalls) between 8 and 14 feet (ft) in height would be effective and could be reasonably built within the freeway right-of-way (ROW) along the existing property line of each residence with the exception of one property where the proposed barrier would have to be located within private property.

Noise levels within the proposed project were determined to be in the range of 67-72 A-weighted decibel (dBA) Leq(h). The proposed soundwalls were determined to provide the minimum required 5 dB noise reduction for the impacted receivers. The IS/EA also analyzed visual impacts associated with the proposed soundwalls and determined that the proposed soundwalls may result in an adverse visual impact to the existing view which would result in conflicting impacts. Therefore, we are contacting you to assist us in finding a remedy to this situation.

Some residents have verbally expressed their opposition to a soundwall that may be 8-ft to 14-ft high and would adversely impact their views. According to state and federal policies, Caltrans will not construct soundwalls if more than 50 percent of the affected property owners do not want them. Therefore, we are sending you the attached survey form in an effort to identify and document those affected property owners who do not want soundwalls. An affected property owner is the registered owner(s) of the property where soundwall will be constructed adjacent to their property.

As part of this effort, Caltrans and the Port of Los Angeles will host a focus meeting on Wednesday, May 12, 2010 at Port of Los Angeles Board Room, 2nd floor, 425 S. Palos Verdes Street, San Pedro, CA 90731, from 6:00 pm to 8:00 pm, to provide all affected property owners with the information about the proposed soundwalls. Our technical specialists will be present to answer your questions pertinent to the proposed soundwalls.

Appendix E Open House Meeting Notes and
Comments Received



TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

Meeting Date: Wednesday January 7, 2008
6:30pm-8:30pm

Location: Banning's Landing Community Center
100 E. Water St. Wilmington, CA 90744

Attendants: Please view Sign in Sheets

Team:

Tony Velasquez, Parsons
James Wei, Parsons
Anne Kochaon, Parsons
Eric Spangler, Parson
Eric Dietrich, Caltrans
Karl Price, Caltrans
Ron Kosinski, Caltrans
Gabe Hamidi, Caltrans
Sue Lai, Port of Los Angeles
Guillermo Martinez, Port of Los Angeles
Prashant Konareddy, Port of Los Angeles
Mimi Gutierrez, Port of Los Angeles
Sal Zambrano, Port of Los Angeles
Stephen John, Port of Los Angeles
Lisa Ochsner, Port of Los Angeles
Gene Bougsanos, HDR
Steve Leathers, HDR
Mary McCormick, MBI Media
Mercedes Rogers, MBI Media
Gabriel Olson, ICF Jones & Strokes
Shilpa Trisal, ICF Jones & Strokes
Laura Grant, Project Control Consultants
Laura Castillo, DSO
Tony Torres, DSO
Helen Yoon, DSO

Meeting Summary:

Caltrans and The Port of Los Angeles hosted a Transportation Projects Open House on January 7, 2009 at the Banning's Landing Community Center, in Wilmington, to present the project proposal and introduce the environmental review process to the public; and to provide the opportunity for the public to express their concerns and comment on the proposed projects. During the sign-in part of the meeting, the attendants were allowed to view the project area maps and project component exhibits, and to ask questions directly to the project team members. The meeting began with the PowerPoint presentation outlining the project purpose and need, proposed actions, environmental process, and project schedule. After the presentation, a break out session was provided to allow the attendants to view the exhibits and ask questions or express their concerns directly to the project development team members. All input and comments heard by the project staff were noted on the flip chart. The attendants were also given the comment card to write down their comments and drop it off at the meeting or they can mail it in to the Port staff at a later date. At the end, the project staff wrapped up the meeting by providing answers to most of the questions raised during the break out session. The meeting lasted about 2 hours.

Questions and Comments for John S. Gibson Blvd. Improvements:

Pre-presentation

- Concerns about temporary closure of Skate Park.
- Resident expressed concerns about sandblasting and particles of soot appearing on their property. (*Byron Ford*)
- Will this project connect to the 47? Resident would like to see this JSG expansion connect with the intended POLA – cruise terminal and CRA – parking lot projects. (*Pat*)
- Noise concerns across the connector from West of the 110.
- What data is there to support the need for expansion?
- Vegetation at residents' homes is impacted and not addressed. (View 4)
- Noise concerns at the occupation center at on ramps.

Post-presentation

- Is there anything being done to protect skaters from pollution?
- Where is funding for this project coming from?
- Can the John S. Gibson project be accelerated?
- Can some lighting and parking be designed to improve safety at the Skate Park?
- Is it possible to designate the new lane to either "commuters only" or "trucks only?"
- Wilmington/San Pedro residents do not want any trucks on this project. This project will increase truck traffic! The local bridges aren't designed for trucks. Truck congestion and truck accidents will increase. (*Jesse Marquez*)
- Where are the prior public comments that were submitted? (*Jesse Marquez*)
- Sound walls should be considered on both sides of the 110 & the 47
- Air Quality, sound quality and vibration (noise and physical) monitoring stations should be considered. (*Carrie Soville – Central San Pedro Neighborhood Council*)
 - Homes are being impacted with damages, cracks on walls.
 - Compensation should be to reconnect the hill (Black Hill) that was cut in half and add a park
- Does Caltrans have intentions to do a Mitigated Negative Declaration? If so, when? Where will it be posted? (Byron Ford)
- There is a large vacant parcel on Gaffey St. owned by Caltrans, use the land!
 - Relocate the skate park there. (*Carrie Soville*)
 - Convert land into a community park
- As the project progresses, how can individuals continue to be involved?

Written Comment Cards

- Comments for the skate park
 - Please try to avoid moving or closing the skate park as many people benefit from the positive forces created by park and people who enjoy it.
 - Appreciate willingness to work with and around the existing Skate Park. The park has a great organization and group of people who will be willing to help/consult.
 - Provide lighting on new structure or entire lot at Channel St.
 - Would Caltrans or POLA be interested in partnering with the Skate Park Assoc to provide alternative or additional skate park sited on unused property.
 - Skate Park saved and inspired a young mans life from being a useless product of society, he hopes that the Skate Park will not be negatively affected by the improvements project.
 - Concern that Skate Park will be affected. Will the Skate Park be able to expand?
 - Can a wall be added to protect people and skaters from trash (truck parts) that fall from trucks
 - There is a support pillar in the middle of the skate park according to the designs, is there any other design that avoids the support pillar in the middle?
 - Voice the publics concerns in effort to protect the Skate Park.

- Skate Park has become a vital part of the Harbor community and it's imperative that the local community retains use of this facility.
- Concern with the proximity of the skate park to the project. Are there any measures to limit exposure to particulate matter from truck traffic to the skaters?
- Comments for both projects
 - A member of the Waterfront Development Committee is happy with the progress POLA has been working on. Pleased with presentation and feels they have something to look forward to in the future of their community.
 - Will you be able to provide more traffic lights, speed limit signs and lots of green areas/trees for our community?
 - I-110/SR-47 appears to be a shipping issue more than a traffic issue. Please take into consideration other merging issues, such as (Sepulveda exit.)
 - Is this project being coordinated with the POLA/CRA projects? The Wilmington Waterfront project? Why not fix the entrance to the SR-47 to exit off the I-110 to Harbor Blvd.
 - How long will this project take to build?
 - The SR-47 Northbound connector widening will add lanes along the length of Harbor Occupational center. This will increase the need for some type of sound barrier. There may be an increase of air pollution and vibrations. I am certain this land be mitigated.
 - Prepare alternatives of requiring use of Alameda Corridor in lieu of doing this project.
 - A member of a local non-profit organization's, concern is the structures that already exist. It's critical to them to know of any supports for widening. They hope all parties will cooperate.
 - How can the community be assured these projects are "improvement" projects? What data exists to support them?
 - How can the community stay informed and get involved during the projects' progress?
 - No land loss from Wilmington for POLA projects
 - No increase on POLA truck on Harbor Freeway
 - No increase on environmental impacts
 - No increase in public health impacts

Prepared By: Laura Castillo, DSO



Open House Comment and Responses



RESPONSE TO COMMENTS RECEIVED DURING OPEN HOUSE John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening Project

Meeting Date: Wednesday January 7, 2008
6:30pm-8:30pm

Location: Banning's Landing Community Center
100 E. Water St. Wilmington, CA 90744

VERBAL COMMENTS

Pre-presentation

Questions & Comments	Response
Concerns about temporary closure of Skate Park.	For the safety of the skate park users, the skate park will be temporarily closed during construction of the Overhead bridge structure located over the skate park. The details and timelines of the closure and construction of the Channel Street Overhead are not yet determined and will become clear once the design is complete and the construction contract is awarded.
Resident expressed concerns about sandblasting and particles of soot appearing on their property. <i>(Byron Ford)</i>	The concerned resident should follow up with the Port of Los Angeles, or the local Caltrans District office. During construction, the contractor will be closely monitored by the Caltrans construction management staff. The contractor will be required to adhere to strict contract terms such as dust abatement, sediment control, etc.
Will this project connect to the 47? Resident would like to see this JSG expansion connect with the intended POLA – cruise terminal and CRA – parking lot projects. <i>(Pat)</i>	This project does not propose to connect John S. Gibson Blvd to SR-47. No new road or freeway connections are proposed as part of this project.
Noise concerns across the connector from West of the 110.	The Noise Study has analyzed and measured noise receptors on the West side of I-110. Recommended noise abatement will be included in the project.
What data is there to support the need for expansion?	The Traffic Study warrants the ramp, freeway, and local road improvements, as well as the Accident Analysis. For example the I-110 northbound off ramp at John S. Gibson Blvd experiences 9 times the state average accident rate.
Vegetation at residents' homes is impacted and not addressed. <i>(View 4)</i>	Actually landscaping and irrigation will be a part of this project. Areas that are disturbed will be planted and irrigated.
Noise concerns at the occupation center at on ramps.	Noise study will be conducted to analyze noise impacts from the proposed project to all sensitive receptors located within the proposed project areas. If adverse effects are determined, then noise abatement measures will be considered.

Post-presentation

Questions & Comments	Response
Is there anything being done to protect skaters from pollution?	The Channel Street Overhead is being widened to current Caltrans Standards with a 10' wide right shoulder and bridge railing. A chain link fence at the top of the bridge rail is proposed to protect people below from debris that would otherwise fall from the freeway overcrossing bridge.
Where is funding for this project coming from?	The Port of Los Angeles is funding 100% of this project.
Can the John S. Gibson project be accelerated?	The project is already accelerated as much as possible per the Port's request.
Is it possible to designate the new lane to either "commuters only" or "trucks only"?	The project traffic study recommends that the additional lanes that are a part of this project be open to all vehicle types for smoother traffic operation.
Wilmington/San Pedro residents do not want any trucks on this project. This project will increase truck traffic! The local bridges aren't designed for trucks. Truck congestion and truck accidents will increase. <i>(Jesse Marquez)</i>	Comment noted.
Where are the prior public comments that were submitted? <i>(Jesse Marquez)</i>	Any comments submitted earlier for this specific project are on file and will be considered during the environmental review process.
Sound walls should be considered on both sides of the 110 & the 47	Soundwalls are being considered on both sides of I-110. Traffic Noise measurements are being taken on both sides of the freeway. Noise abatement measures will be incorporated into the project where the Noise Study justifies them.
Air Quality, sound quality and vibration (noise and physical) monitoring stations should be considered. <i>(Carrie Soville – Central San Pedro Neighborhood Council)</i> - Homes are being impacted with damages, cracks on walls. - Compensation should be to reconnect the hill (Black Hill) that was cut in half and add a park	Impacts on air quality and noise would be analyzed among many other resources.
Does Caltrans have intentions to do a Mitigated Negative Declaration? If so, when? Where will it be posted? <i>(Byron Ford)</i>	Based on the preliminary environmental analysis report, an Initial Study (IS) leading to Mitigated negative Declaration under CEQA and Environmental Assessment (EA) leading to Finding of No



Open House Comment and Responses



	Significant Impact (FONSI) under NEPA would be prepared. It is estimated that the draft IS/EA would be available for public review and comment in fall 2008.
There is a large vacant parcel on Gaffey St. owned by Caltrans, use the land! - Relocate the skate park there. (<i>Carrie Soville</i>) - Convert land into a community park	If this land does exist, we should take a deeper look into it.
As the project progresses, how can individuals continue to be involved?	As mentioned above, the public would have an opportunity to review and comment on the draft IS/EA during the public review period. Additional public meetings will also be scheduled during the public review period of the environmental document.

WRITTEN COMMENT CARDS

Comments for John S. Gibson Improvements & Skate Park

Comments & Questions	Response
Please try to avoid moving or closing the skate park as many people benefit from the positive forces created by park and people who enjoy it.	The skate park is being recognized by Caltrans and the Port of LA. A high priority for both agencies is to minimize the impacts to the skate park. Both agencies intend to keep the skate park where it is. The skate park however will have to closed for 6 to 9 months during the construction of the Channel Street Overhead for the safety of the skaters.
Appreciate willingness to work with and around the existing Skate Park. The park has a great organization and group of people who will be willing to help/consult.	The Port of LA and Caltrans appreciate the positive feedback received by the skate park community.
Provide lighting on new structure or entire lot at Channel St.	Comment noted.
Would Caltrans or POLA be interested in partnering with the Skate Park Assoc to provide alternative or additional skate park sited on unused property.	POLA will take this into consideration, but no commitment has been made at this stage.
Skate Park saved and inspired a young mans life from being a useless product of society, he hopes that the Skate Park will not be negatively affected by the improvements project.	This is why the Port and Caltrans intend to keep the skate park where it is.
Concern that Skate Park will be affected. Will the Skate Park be able to expand?	Before the skate park thinks of expansion, they should acquire permitting through the Port of LA and Caltrans. The Skate Park now has to expand under legal measures.
Can a wall be added to protect people and skaters from trash (truck parts) that fall from trucks	The widened Channel Street Overhead will include a 10' wide right shoulder and bridge railing. A chain link fence at the top of the bridge rail is proposed to protect people below from debris that would otherwise fall from the freeway overcrossing bridge.
There is a support pillar in the middle of the skate park according to the designs, is there any other design that avoids the support pillar in the middle	If the column doesn't come down in the park, it will need to come down in the Railroad right of way and require railroad realignment. This alternative is being considered. If the column does come down in the skate park, it will be between skate pools, so as to minimize impacts to the existing park.
Voice the publics concerns in effort to protect the Skate Park.	Comment noted.
Skate Park has become a vital part of the Harbor community and it's imperative that the local community retains use of this facility.	Comment noted.
Concern with the proximity of the skate park to the project. Are there any measures to limit exposure to particulate matter from truck traffic to the skaters?	The skate park community decided to build the park under the freeway, not the other way around.
Happy with the progress POLA has been working on. Pleased with presentation and feels they have something to look forward to in the future of their community.	Comment noted.
Will you be able to provide more traffic lights, speed limit signs and lots of green areas/trees for our community?	Comment to be considered.
I-110/SR-47 appears to be a shipping issue more than a traffic issue. Please take into consideration other merging issues, such as (Sepulveda exit.)	Comment noted.
Is this JSG expansion project being coordinated with the intended POLA – cruise terminal and CRA – parking lot projects?	Other Port projects would be considered related projects to this proposed project.
How long will this project take to build?	Approximately 2 years.
The SR-47 Northbound connector widening will add lanes along the length of Harbor Occupational center. This will increase the need for some type of sound barrier. There may be an increase of air pollution and vibrations. I am certain this land be mitigated.	Noise study will be conduct to analyze noise impacts from the proposed project to all sensitive receptors located within the proposed project areas. If adverse effects are determined, then noise abatement measure will be considered.
Prepare alternatives of requiring use of Alameda Corridor in lieu of doing this project	Comment to be considered.
Concern is the structures that already exist. It's critical for them to know of any supports for widening. They hope all parties will cooperate.	Statement noted.
How can the community be assured these projects are "improvement" projects? What data exists to support them?	The project Traffic Study and Accident Analysis warrant the need for the improvements.
How can the community stay informed and get involved during the projects' progress?	The public would have an opportunity to review and comment on the draft IS/EA during the public review period. Additional public meetings will also be scheduled during the public review period of the environmental document.
No land loss from Wilmington for POLA projects	The proposed John S. Gibson improvement project will require a minor strip of privately owned land currently vacant.
No increase on POLA truck on Harbor Freeway	This project is undertaken to accommodate the vehicular traffic projected to occur due to Port activities and natural growth.



Open House Comment and Responses



No increase on environmental impacts	Mitigation measures will be identified to mitigate environmental impacts resulting from the proposed project. Based on the preliminary environmental analysis report, it appears all potential impacts can be mitigated to the level of less than significant.
No increase in public health impacts	The Port has taken major steps in preparing a Health Risk Assessment (HRA) for all projects currently underway at the Port. This HRA took into consideration the JSG and C-Street improvement projects.

WRITTEN COMMENT LETTER

Letter from Gaffey Place Neighbors/Back Hill Neighborhood Watch Committee

Comments & Questions	Response
Other on-going projects including C street Interchange Improvements Channel Street/John S. Gibson Off-Ramps improvements should be considered the same project since they have the same purpose to increase the flow of traffic to serve the Port.	The Port is using the same traffic model for each project; therefore, all future traffic volumes of the related projects have been accounted for. The environmental document prepared for each project has accounted other nearby projects as related projects and cumulative impacts are assessed.
<p>Impacts from SR 47/I-110 improvements:</p> <ul style="list-style-type: none"> Increasing truck traffic would exacerbate instability of Back Hill from erosion and vibration. Currently Residents nearby the interchange have experienced a soot of dust from traffic operation. Many have health problems from this effect. Trucks get lost in the neighborhood street due to inadequate signage resulting in disturbance to the neighborhood. Bike lanes around the neighborhood are dangerous because they share the road with truck traffic. There are no soundwall and the foliage has been removed resulting in exposure to pollutants. 	<p>The proposed project would be designed to meet Caltrans highway standard, which would incorporate measures for erosion control and foundation stability.</p> <p>The purpose of the SR 47/I-110 interchange is to improve access for trucks to the North I-110 freeway using John S. Gibson Boulevard on- and off-ramps; Improve safety for traffic traveling from SB SR 47 connecting to NB I-110; and to reduce existing and forecasted traffic congestion. The project does not intend to increase traffic volume. With the improvement at John S. Gibson Gates, truckers would be encouraged to stay on the freeway rather than using the local roadway. With the proposed improvement, signs will be provided on state facilities per Caltrans standard.</p> <p>To minimize air quality impacts within the San Pedro area, the Ports of Los Angeles and Long Beach, jointly prepared the San Pedro Bay Ports Clean Air Action Plan (CAAP), in cooperation with SCAQMD, California Air Resource board (CARB), and EPA. The CAAP was developed to define implementation strategies to meet shared air quality improvement goals for both Ports. The CAAP was initiated in response to direction from the mayor and Board of Harbor Commissioners. The CAAP was released as a draft Plan for public review on June 28, 2006, and it was approved by both the Los Angeles and Long Beach Board of Harbor Commissioners on November 20, 2006. The CAAP focuses on reducing emissions with two main goals: (1) reduce Port-related air emissions in the interest of public health and (2) accommodate growth in trade. The Plan includes near-term measures implemented largely through the CEQA/NEPA process, tariffs, and new leases at both Ports.</p> <p>As part of the proposed improvements, soundwall will be constructed along the eastside of the SR-47/I-110 connector.</p>
Several mitigation measures were proposed.	<ul style="list-style-type: none"> Advise the steps that are being taken to ensure that the home values do not decrease due to the increased truck traffic. <i>Response: The purpose of the SR 47/I-110 interchange is to improve access for trucks to the North I-110 freeway using John S. Gibson Boulevard on- and off-ramps; Improve safety for traffic traveling from SB SR 47 connecting to NB I-110; and to reduce existing and forecasted traffic congestion. The project does not intend to increase traffic volumes.</i> Advise on the steps that are being taken to reduce/remove the graffiti and dumping in the area. <i>Response: Landscaping will be provided at the proposed soundwall. Graffiti resistant materials will be chosen with concurrence by the nearby residents.</i> Install permanent air quality monitoring at the interchange. <i>Response: See the above response about the Port's CAAP implementation. No specific monitoring station at the interchange would not be required.</i> Install permanent noise, including noise vibration monitoring stations at the interchange. <i>Response: The proposed improvements will be designed to meet Caltrans' highway standards. Based on the preliminary results of noise study prepared as part of this project, operation of the proposed improvements would not result in noise impacts above the current level. Installing the noise vibration monitoring station is not within the scope of this project mitigation.</i> Install permanent vibration monitoring stations at the interchange. <i>Response: See the above response.</i> Install boundary fence around Leland Park (residential safety – issues/concerns): <i>Response: This is outside of this proposed improvement scope of work.</i> Complete brush clearing on the east side of I-110 and throughout the interchange. <i>Response: Vegetation upkeep is determined by Caltrans. In many cases vegetation is required to prevent erosion.</i>



Open House Comment and Responses



	<ul style="list-style-type: none">• Temporary installation of construction mesh on residential fences for privacy and to block dust, etc. <i>Response: Residential fences adjacent to construction zones will be fenced off during construction.</i>• Community notification mechanism needed – signage, door hangers with a contact phone numbers: <i>Response: The Port would continue the public outreach program to keep residents, businesses, and any service providers within the project area informed, and to inform surrounding communities about the project construction schedule, traffic-impacted areas and the Traffic Management Plan, and other relevant project information.</i>• Post Caltrans project sign with contact information on fence/gates, especially at irrigation facilities. <i>Response: Prior to and during project construction, signage will be provided with contact information.</i>• Post bilingual directional signs for truck route. <i>Response: Adequate signs will be provided on state facilities per Caltrans standard.</i>• Post “No trucks” signs on SR 47 off-ramp at Gaffey Place. <i>Caltrans will consider if this signage is appropriate to include as a part of this project.</i>• Provide community access to parcel west of Gaffey Street. Work with community to develop a park, community garden, skate park or other public use of this site. <i>Response: This request is beyond the scope of this project.</i>
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JOHN S. GIBSON BLVD/I-110 FREEWAY ACCESS RAMP IMPROVEMENTS & SR-47/I-110 NORTHBOUND CONNECTOR WIDENING

SOUNDWALL FOCUS MEETING NOTES

May 12, 2010

6:00-8:00 PM

Port of Los Angeles, 2nd Floor Board Room
425 S. Palos Verdes Street, San Pedro

Attendees

Name	Organization	Phone	Email
Mimi Gutierrez	POLA	(310) 732-3339	gutierrezmi@portla.org
Lisa Oschner	POLA – Environmental	(310) 732-3412	loschner@portla.org
Guillermo Martinez	POLA - Project Engineer	(310) 732-3090	gmartinez@portla.org
Prashant Konareddy	POLA - Project Manager	(310) 732-3362	pkonareddy@portla.org
Sue Lai	POLA - Program Manager	(310) 732-3649	slai@portla.org
Sal Zambrano	POLA - Harbor Engineer	(310) 732-3654	szambrano@portla.org
James Wei	Parsons - Project Engineer	(626) 440-6327	James.Wei@parsons.com
Tony Velasquez	Parsons - Project Manager	(626) 440-3448	Tony.Velasquez@parsons.com
Anne Kochoon	Parsons – Environmental	(626) 440-6055	Anne.Kochoon@parsons.com
Thanh Luc	Parsons - Noise Specialist	(626) 440-	Thanh.luc@parsons.com
Karl Price	Caltrans -	(213)	Karl_Price@dot.ca.gov
Ben Ehsani	Caltrans – PPM	(213) 897-1051	Ben_Ehsani@dot.ca.gov
Hamid Toossi	Caltrans – Design	(213) 897-2923	Hamid_R_Toossi@dot.ca.gov
Eric Dietrich	Caltrans - Environmental	(213) 897-2824	Eric_Dietrich@dot.ca.gov
Arnold Parmar	Caltrans -	(213)	Arnold_Parmar@dot.ca.gov
Roland Cerna	Caltrans -	(213)	Roland_Cerna@dot.ca.gov
Alan Lee	FPL & Assoc. - City of LA B permit	(949) 252-1688	alan.lee@fplandassociates.com
Laura Grant	Project Control Consulting	(310) 514-9971	Laura.Grant@program-reporting.com

Name	Address	Phone	Email	Organization
Ramon Samawiego	663 W. Oliver San Pedro, CA 90731	(310) 547-4768		Home Owner (House)
Jodi Ford	724 N. Gaffey, P1 San Pedro, CA 90731	(310) 207-6507		Home Owner
Ron Johnson	525 N. Grand San Pedro, CA 90731	(310) 548-4321		Home Owner
Darlene Persinger	16701 Mt. Cachvma Cr Fountain Valley, CA 92708	(714) 839-9004	crudegal@aol.com	Owner of 679 W. Oliver St.
Luis Romero	679 W. Oliver St San Pedro, CA 90731	(310) 519-3561		Renter
Kimberly Garcia	679 W. Oliver St San Pedro, CA 90731	(310) 519-3561		Renter
Byron Ford	724 N. Gaffey, P1 San Pedro, CA 90731			
Mary Fidalizo	934 N. Gaffey Place San Pedro, CA 90731			Property Owner
Jose Aponte	929 N Grand Ave. San Pedro, CA 90731	(310) 514-8871		Property Owner
Rob Edwards	964 N. Gaffey Place San Pedro, CA 90731			Self
Karen Kinsley	642 W. Oliver San Pedro, CA 90731	(310) 547-9538	karenkinsley@att.net	Self
Nelson Carrasquillo	916 N. Gaffey Place San Pedro, CA 90731	(310) 218-6051	nutritionalbiz2002	Self
Gerald Nyhus	682 W. MacArthur San Pedro, CA 90731	(310) 833-0109		Self
Richard Davis	928 N. Gaffey Place San Pedro, CA 90731	(310) 548-8551		Self
Shannon Nyhus	682 W. MacArthur San Pedro, CA 90731	(310) 833-0109		Self
Joaquin Sandaniego	648 W. Oliver St San Pedro, CA 90731	(310) 831-0101		Self
Gilberto Coballero	643 W. Oliver St San Pedro, CA 90731	(310) 547-3074		Self

Introductions/Welcome/Presentation

Items discussed:

- Home owners will be compensated for the construction easement.
- Construction will be done on the freeway side.
- Walls will be built on State Row, abutting private property, with one exception on private property
- Votes due
 - Ballots not returned will be counted as a yes vote
 - Votes only count to the affected residents of the soundwall.

Questions and Comments from Residents

Comment: The resident located at 679 West Oliver (Darlene) would like the soundwall extended to include her property since she is directly affected by noise from the freeway. She did not receive a ballot since there isn't a soundwall proposed behind her house, but would like the opportunity to vote.

Answer: This option will be explored by the project manager. This property may be outside of the project limit.

Question: If the soil will not accommodate the wall, what is the next step?

Answer: A geological investigation will be performed to characterize the soil prior to construction. based on the engineer's experience this will not be an issue..

Resident: Gerald Nyhus, 682 W. MacArthur, San Pedro, CA 90731

Question: Will Caltrans take our property if the soil doesn't accommodate the wall since we are very close to a drain?

Answer: The drain would be moved to accommodate the soundwall construction. No private property take is anticipated.

Resident: Rob Edwards 964 N. Gaffey Place, San Pedro, CA 90731

Comment: This resident doesn't want the wall because it will block his view. Since his house is the last house protected by the proposed soundwall and it is located at the end of the wall, he asked if the wall could be stopped at his neighbor's property.

Answer: The noise specialist will have to study whether his neighbor would be affected by the shorter wall. Since the wall may have to be wrapped around his neighbor's property, consent from the property's owner and he himself would be required.

Resident: Gerald Nyhus, 682 W. MacArthur, San Pedro, CA 90731

Comment: This resident also doesn't want the wall because it will block his view. Since his house is the last house covered by the soundwall, he asked if the wall could be stopped short of his property.

Answer: The noise specialist will have to study whether his neighbor would be affected by the shorter wall. Since the wall may have to be wrapped around his neighbor's property, consent from the property's owner and he himself would be required.

Luis Romero, renter at 679 W. Oliver Street, San Pedro, CA 90731

Comment: When Caltrans first built on these properties, they took property which affected a couple of garages along fence lines. Is there any way that Caltrans could gift the property gap between the fence and the resident property lines, since there are many issues that this gap brings to the residents such as dry brush which is a fire

hazard, homeless people who set up tents and live there, and drug addicts. The residents would like to eliminate this area.

Answer: It is not likely that Caltrans can give the land between the resident's property line and the fence. If the residents would like Ivy planted along/on the wall, this would be a good option to reduce graffiti. This project will also remove the vegetation in the gap area, which should help to eliminate the draw to homeless.

Ron Johnson 525 N. Grand, San Pedro, CA 90731

Question: Most of the noise in his house comes from the 2nd floor. Will the sound wall help with this?

Answers: The soundwall was designed to primarily reduce noise levels at the outdoor use area at ground level.

Question: Will the soundwall change the vibration of the windows?

Answer: Purpose of the project is to improve traffic flow. The noise study indicated that noise levels within the project area are not expected to increase by a more than 1 decibel as a result of the proposed improvements. However, the future noise levels would have the potential to increase due to normal traffic volume increase along the freeway. The soundwall is designed to reduce traffic noise only.

Gerald Nyhus, 682 W. MacArthur Ave, San Pedro, CA 90731

Question: It was mentioned that the soundwall will reduce the noise level by one half. Could I get a copy of the study that shows the reduction of the noise level to be one half?

Answer: The actual noise reduction in decibels will not be 50 percent, but to the human ear, a 10-dB reduction would be perceived as approximately as half as loud, which is what that comment was referring to.

Question: When will the construction begin?

Answer: The design is currently scheduled to be completed by mid 2011. Therefore, it would be approximately 2 years before construction begins. All sprinklers affected by construction will be removed and reconstructed.

Question: Will this wall prevent me from building a new structure within my property?

Answer: This will be dependent on city guidelines, since these must be followed with any new construction.

Question: When will homeowners be notified?

Answer: When voting is completed, residents will be notified of the results. These results will be disclosed in the environmental document..

Question: What kind of security measures will be taken? Barb wire?

Answer: Historically 14' walls are very hard to climb. If the only access is on the freeway side, the walls itself will be secure, and there will not be any access openings which will further protect the houses. This project will also remove the vegetation in the gap area, which should help to eliminate the draw to homeless.

Question: What's the noise level that hearing damage occurs?

Answer: Over 100 decibels. The soundwalls are proposed to abate the noise levels for comfort of the residents, not to prevent damage since the current noise level within the project area does not cause damage to human hearing. Based on Caltrans and federal noise abatement criteria, noise impact at residential land uses would be considered to occur when the noise levels approach or exceed 67 decibels. Caltrans considers noise levels within 1 dB of the 67 dBA criterion as approaching; therefore, residences where future predicted noise levels exceeding 65 dBA would be considered impacted. The noise study prepared for this project estimated

that the future noise levels at various first-row residences within the project area due to normal traffic growth could would exceed 65 dBA. Thus, soundwalls are being considered.

Question: If a resident votes “no”, can they later change their vote to yes?

Answer: The voting process is on-going and will be ended by May 21st. Caltrans will decide whether to construct a soundwall at various proposed locations based on the result of the vote. The construction will be at Caltrans expense. If the residents voted against the soundwall construction, they will not have right to request the soundwall again. The wall then will be constructed at the home owner’s expense.

Question: Who will be responsible for the maintenance of the soundwall?

Answer: Since it is on State ROW, Caltrans will be responsible for the maintenance. On one soundwall, where the entire proposed wall is located on private property within one property, maintenance will be the responsibility of the homeowner if the owner consents to this barrier to be built.

Question: Who can I talk to regarding a tree that has a bee-hive in it?

Answer: You can dial 311 or Call the Council Office.

Appendix F Title VI Policy

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
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TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

August 25, 2009

**TITLE VI
POLICY STATEMENT**

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.


RANDELL H. IWASAKI
Director

Appendix G Minimization and Mitigation Summary

Mitigation Implementation, Scheduling, and Reporting

No.	Mitigation Measure	Affected Resource(s)	Schedule of Implementation	Implementation Responsibility	Verification and Record Keeping
MM LU-1	<p>Prepare a Traffic Management Plan (TMP) to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the City of Los Angeles Department of Transportation and Caltrans, and it shall be provided with the construction plan to the City of Los Angeles Police and Fire Departments prior to commencement of construction activities. The TMP shall include, but is not limited to, the following implementation plans:</p> <ul style="list-style-type: none"> • Public Information: Provide project update to the affected residents and businesses including general public via brochures and mailers, community meeting, and website. • Motorist Information: Provide project information using changeable message signs and ground mounted signs. • Incident Management: Implement Construction Zone Enhanced Enforcement Program (COZEEP), freeway service patrol, and California Highway Patrol (CHP) traffic handling. • Traffic Management during Construction: Provide traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes and temporary traffic signal during construction. 	Land Use	During construction activities	LAHD	LAHD, Caltrans
MM CCC-1	This mitigation measure is the same as MM LU-1. Please see above for details.	Community Character and Cohesion	During construction activities	LAHD	LAHD, Caltrans
MM CCC-2	Continue the public outreach program to keep residents, businesses, and any service providers within the project area informed, and to inform surrounding communities about the project construction schedule, traffic-impacted areas and the TMP, and other relevant project information.	Community Character and Cohesion	Final Design	LAHD	Caltrans

No.	Mitigation Measure	Affected Resource(s)	Schedule of Implementation	Implementation Responsibility	Verification and Record Keeping
MM CCC-3	Coordinate with the Channel Street Skate Boarding Association to keep skaters informed of the proposed project schedule and the period that the skate facility needs to be closed.	Community Character and Cohesion	Final Design	LAHD	LAHD, Caltrans
MM CCC-4	Encourage the skate facility to apply for an operation permit for the facility.	Community Character and Cohesion	Final Design	LAHD	LAHD, Caltrans
MM U&ES-1	Work in close coordination with the utility service providers in advance of construction activities to relocate affected utilities to minimize the impacts to the consumers.	Utilities and Emergency Services	Final Design Prior to Construction	LAHD	LAHD, Caltrans
MM U&ES-2	This mitigation measure is the same as MM LU-1. Please see above for details.	Utilities and Emergency Services	During construction activities	LAHD	LAHD, Caltrans
MM Traffic-1	This mitigation measure is the same as MM LU-1. Please see above for details.	Traffic and Transportation /Pedestrian Facilities	During construction activities	LAHD	LAHD, Caltrans
MM VIS-1	Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project elements based on the Caltrans Aesthetic and Landscape Master Plan.	Visual Resources	Final Design	Design Consultant	LAHD, Caltrans
MM VIS-2	Apply architectural detailing to the soundwalls and retaining walls, including textures, colors, and patterns. Include caps that will provide shadow lines.	Visual Resources	Construction Phase	Construction Contractor	LAHD, Caltrans
MM VIS-3	Include vine plantings to soften the new soundwalls.	Visual Resources	Construction Phase	Construction Contractor	LAHD, Caltrans
MM VIS-4	Apply anti-graffiti coating to all visible walls.	Visual Resources	Construction Phase	Construction Contractor	LAHD, Caltrans
MM VIS-5	Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange and the highway.	Visual Resources	Final Design	Design Consultant	LAHD, Caltrans
MM VIS-6	Use a visually compatible ornamental groundcover in any detention/water quality basins or geoswales that are located within ornamental landscape areas.	Visual Resources	Final Design	Design Consultant	LAHD, Caltrans
MM VIS-7	Landscape and revegetate disturbed areas to the greatest extent feasible. Landscaping should include appropriate	Visual Resources	Construction Phase	Construction Contractor	LAHD, Caltrans

No.	Mitigation Measure	Affected Resource(s)	Schedule of Implementation	Implementation Responsibility	Verification and Record Keeping
	irrigation, establishment, and maintenance to assure ongoing success of the plantings.				
MM CUL-1	Prepare and implement an Archaeological Data Recovery Plan (also known as Phase III excavations) for the portion(s) of Site CA-LAN-283 to be affected by the project prior to any ground-disturbing activities.	Cultural Resources	Prior to Construction	LAHD	LAHD, Caltrans
MM CUL-2	If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.	Cultural Resources	Construction Phase	Construction Contractor	LAHD, Caltrans
MM PAL-1	Retain a qualified paleontologist prior to the start of construction to develop and implement a Paleontological Mitigation Plan. Paleontological monitoring shall be conducted onsite to inspect new exposures created by earth-moving activities in areas underlain by the older alluvium and at depths greater than 5 feet below current grade for the younger alluvium. Rock samples from rock units in the San Pedro and Palos Verdes Sand shall be collected and analyzed for the paleontological potential.	Paleontology	Prior to Construction and during construction activities	LAHD	LAHD, Caltrans
MM PAL-2	If any fossils are found, then excavation activities shall be temporarily halted to allow samples to be collected and analyzed for paleontological potential. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution.	Paleontology	During earth disturbing activities	Paleontology Consultant	LAHD, Caltrans
MM HM-1	Conduct soil profiling while handling soil at the project site during construction. If the soil contains contaminant concentrations that meet the definition of hazardous materials, then the contractor would be required to adhere to City of Los Angeles Standard Specifications (known as the Greenbook), which address the management of various hazardous materials and wastes consistent with the federal and state of California requirements pertaining to	Hazardous Waste/Materials	During Construction Phase	Construction Contractor	LAHD, , Caltrans

No.	Mitigation Measure	Affected Resource(s)	Schedule of Implementation	Implementation Responsibility	Verification and Record Keeping
	hazardous materials and wastes management.				
MM HM-2	Collect and analyze water collected during dewatering for Total Petroleum hydrocarbon (TPH) gasoline/diesel and volatiles organic compounds (VOCs) if a construction dewatering system is planned.	Hazardous Waste/Materials	During Construction Phase	Construction Contractor	LAHD, Caltrans
MM HM-3	Collect soil samples from the drilling of CIDH piles and analyze for CAM Title 22 Metals per the work plan to be approved by Caltrans to determine proper off-site disposal, and/or re-use of this soil.	Hazardous Waste/Materials	At completion of pile drilling	Construction Contractor	LAHD, Caltrans
MM HM-4	Dispose of any hazardous materials or wastes encountered before or during the construction phase of the project according to current regulatory guidelines.	Hazardous Waste/Materials	During Construction Phase	Construction Contractor	LAHD, Caltrans
MM AQ-1	Construction contractor shall adhere to the current LAHD Sustainable Construction Guidelines for Reducing Air Emissions during project construction phase. The LAHD shall determine the applicable BMP's once the contractor identifies and secures a final equipment list and project scope.	Air Quality	Construction Phase	Construction Contractor	LAHD
MM Noise-1	Noise control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications and these special provisions.	Noise	Construction Phase	Construction Contractor	LAHD, Caltrans
MM BIO-1	Clearance of vegetation at the top of the slope above the I-110 connector, and any land adjacent to the ends of the Channel Street Overhead, shall be conducted during the non-nesting season (between September 1 to February 15) to preclude direct effects on any migratory nesting bird species that might be in the project area.	Biological Resources (Animal Species)	Prior to Construction During Construction Activities	Construction Contractor	LAHD, Caltrans
MM BIO-2	The thin structural gaps at the top of each support pillar beneath the Channel Street Overhead shall be filled with any convenient, suitable material. The gaps shall be filled when bats have departed, which is between mid-September and	Biological Resources (Animal Species)	Prior to Construction During Construction Activities	Construction Contractor	LAHD, Caltrans

No.	Mitigation Measure	Affected Resource(s)	Schedule of Implementation	Implementation Responsibility	Verification and Record Keeping
	early February.				
MM BIO-3	Coarse mesh cover shall be fitted over the weepholes through the Channel Street Overhead soffits at the same time to prevent any bats from gaining entrance to the interior of the box and thus being subject to disturbance.	Biological Resources (Animal Species)	Prior to Construction During Construction Activities	Construction Contractor	LAHD, Caltrans
MM BIO-4	In compliance with the Executive Order on Invasive Species, EO 13112, the landscaping and erosion control included in the project will not use species listed as noxious weeds.	Biological Resources (Invasive Species)	During Construction Activities	Landscape Contractor	LAHD, Caltrans
MM BIO-5	Precautions shall be taken to prevent the propagation of invasive species found in or adjacent to the construction areas. These include inspection and cleaning of construction equipment and eradication strategies.	Biological Resources (Invasive Species)	During Construction Activities	Landscape Contractor	LAHD, Caltrans

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Log No.	Commitment Type	Responsible Party	Monitoring Frequency	Implementation/ Monitoring Phase	SSP# / NSSP#	Env Doc/ Permits/ Specs/ Plans/ Estimates REFERENCE	Commitment Measure	Completed Signature Page	Remarks
BIOLOGY									
1-1	Biological Monitoring Required for Plant Establishment	Bio, Paul Caron	To Be Determined/A Few Growing Seasons/5 years	Post-Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, VIS-3, VIS-6, VIS-7	Monitoring of revegetation such as trees and groundcover plantings		
1-2	Vegetation	Bio, Paul Caron	One time	Pre-Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.3.1, pg 2-62	Temporary Clearing of existing Vegetation along SR 47 to I-110 freeway connector along the base of the slope for the retaining wall construction of the potential soundwall.		
1-3	Vegetation Clearance	Bio, Paul Caron	One Time	Pre-Con		IS/EA MND FONSI (04-2011), Ch 2, 2.20.4, pg 2-201; MM BIO-1	Clearance of vegetation at the top of the slope above the I-110 connector, and any land adjacent to the end of the Channel Street Overhead, shall be conducted during the non-nesting season (between September 1 to February 15) to preclude direct effects on any migratory nesting bird species that might be in the project area.		
1-4	Bat Deterrence - Support Pillars	Bio, Paul Caron	As Needed	Pre-Con & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.20.4, pg 2-201; MM BIO-2	The thin structural gaps at the top of each support pillar beneath the Chanel Street Overhaed shall be filled with any convenient, suitable material. The gaps shall be filled when bats have departed, which is between mid-September and early February		
1-5	Bat Deterrence - Weep Holes	Bio, Paul Caron	As Needed	Pre-Con & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.20.4, pg 2-201; MM BIO-3	Coarse mesh cover shall be fitted over the weepholes through the Channel Street Overhead soffits at the same time as MM Bio-2, to prevent any bats from gaining entrance to the interior of the box and thus being subject to disturbance if overcrossing construction occurs during the summer months.		
1-6	Invasive Species	Bio, Paul Caron/Landscape	As Needed	Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.22.4, pg 2-204; MM BIO-4	In compliance with the Executive Order on Invasive Species, EO13112, the landscaping and erosion control included in the project will not use species listed as noxious weeds.		
1-7	Invasive Species - Deterrence	Bio, Paul Caron/Landscape	As Needed	Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.22.4, pg 2-204; MM BIO-5	Precautions shall be taken to prevent the propagation of invasive species found in or adjacent to the construction areas. These include inspection and cleaning of construction equipment and eradication strategies.		
VISUAL/LANDSCAPE									
2-1	Caltrans Aesthetic & Landscape Master Plan	Visual/Aesthetics, Glen Lavstik	One Time	Final Design		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-1	Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project and elements based on the Caltrans Aesthetic and Landscape Master Plan.		
2-2	Archetictural Detailing	Visual/Aesthetics, Glen Lavstik	One Time	Design & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-2	Apply architectural detailing to the soundwalls and retaining walls, including textures, colors, and patterns. Include caps that will provide shadow lines		
2-3	Plant Palette - Vines	Visual/Aesthetics, Glen Lavstik	One Time	Design & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-3	Include vine plantings to soften the new soundwalls.		
2-4	Anti-Graffiti Coating	Visual/Aesthetics, Glen Lavstik	One Time	Design & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-4	Apply anti-graffiti coating to all visible walls.		
2-5	Drainage for Plantings	Visual/Aesthetics, Glen Lavstik	One Time	Design		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-5	Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange and the highway.		

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2-6	Ornamental Landscaping	Visual/Aesthetics, Glen Lavstik	One Time	Design		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-6	Use a visually compatible ornamental groundcover in any detention/water quality basins or geoswales that are located within ornamental landscape areas.		
2-7	Landscaping Disturbed Areas	Visual/Aesthetics, Glen Lavstik	One Time	Design & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.8.4.2, pg 2-77, MM VIS-7	Landscape and revegetate disturbed areas to the greatest extent feasible. Landscaping should include appropriate irrigation, establishment, and maintenance to assure ongoing success of the plantings.		
CULTURAL RESOURCES									
3-1	Environmentally Sensitive Areas for Archaeological Resources	Archaeologist, Alex Kirkish	On-Going	Pre & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.9.2.4, pg 2-85	If cultural resources are encountered, treat as "Post Review Discoveries"		
3-2	Environmentally Sensitive Areas for Archaeological Resources	Archaeologist, Alex Kirkish	On-Going	Pre & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.9.2.4, pg 2-86	If human remains are encountered, treat as "Post Review Discoveries"		
3-3	Cultural Resources Phase 3 Excavation Coordination	Archaeologist, Alex Kirkish	One Time	Pre & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.9.3.2, pg 2-88, MM CUL-1	Implement a Data Recovery Plan for the portion of CA/LAN-283.		
3-4	Unearth Human Remains/Cultural Materials Provisions	Archaeologist, Alex Kirkish	One Time	Pre & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.9.3.2, pg 2-88, MM CUL-2	If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.		
PALEONTOLOGY									
4-1	Monitoring Required	Cultural Resources/LAHD	On-Going	Pre-Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.13.4, pg 2-108, MM PAL-1	Retain a qualified paleontologist prior to the start of construction to develop and implement a Paleontological litigation Plan. Paleontological monitoring shall be conducted onsite to inspect new exposures created by earth-moving activities in areas underlain by the older alluvium and at depths greater than 5 feet below current grade for the younger alluvium. Rock samples from rock units in the San Pedro and Palos Verdes Sand shall be collected and analyzed for the paleontological potential.		
4-2	Unexpected Discovery Provisions	Cultural Resources/LAHD	On-Going	Pre and Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.13.4, pg 2-108, MM PAL-2	If any fossils are found, then excavation activities shall be temporarily halted to allow samples to be collected and analyzed for paleontological potential. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution.		
COMMUNITY/SOCIAL IMPACTS									
5-1	ADA Requirements	Gen., Eric Dietrich	One Time	Design & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.7.3.2, pg 2-53	Throughout the project, all curb ramps would be upgraded to meet current ADA requirements.		
5-2	Skate Boarding Outreach	LAHD/Gen., Eric Dietrich	As Needed	Final Design		IS/EA MND FONSI (04-2011), Ch2, 2.3.4, pg 2-29, MM CCC-3	LAHD would coordinate with the Channel Street Skate Boarding Association to keep skaters informed of the proposed project schedule and the period that the skate facility needs to be closed.		
5-3	Skate Boarding Facility Permits	LAHD/Gen., Eric Dietrich	As Needed	Final Design		IS/EA MND FONSI (04-2011), Ch2, 2.3.4, pg 2-29, MM CCC-4	LAHD would work in cooperation with Caltrans, City of Las Angeles Department of Rec & Parks, Council Dist 15 and the Channel Street Skate Boarding Association to encourage the skate facility to apply for an operation permit for the facility.		

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5-4	Community Outreach - Ongoing	LA Harbor Dept/Gen.,Eric Dietrich/RE	As Needed	Design & Con		IS/EA MND FONSI (04-2011), Ch2, 2.3.4, pg 2-29, MM CCC-2	Continue the public outreach program to keep residents, businesses, and any service providers within the project area communities about the project construction schedule, traffic-impacted areas and the TMP, and other relevant project information.		
5-5	Temporary closure of skatepark	LA Harbor Dept/Gen.,Eric Dietrich/RE	As Needed	Design & Con		IS/EA MND FONSI (04-2011), Ch2, 2.4.4, pg 2-33	LAHD will be in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) for the impact of the temporary closure of the Channel Street Skate Facility.		
5-6	Traffic Management Plan	LA Harbor Dept/Eric Dietrich/RE/ Contractor	As Needed	Pre-Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.2.3 Pg 2-18; 2.3.4 pg 2-29, 2.7.4 pg 2-53, 2.26.4.1 pg 2-228; MMLU-1, MM CCC-1, MM Traffic-1	A TMP/traffic staging plan shall be prepared to minimize direct and cumulative construction impacts on the community. The TMP shall include the following; Public Information, Motorist Information, Incident Management and Traffic Management during Construction. The TMP would need to be made available to the Public, LAPD, LAFD.		
5-7	Nonmotorized and Pedestrian Features	Gen., Eric Dietrich/RE	One Time	Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.7.2 pg 2-50	Fill-in missing gap in sidewalk, striping for bike lane, curb ramps reconstructed		
UTILITY & EMERGENCY SERVICES									
7-1	Utilities-Outreach	LAHD/R.E.	One Time	Final Design/Pre-Con		IS/EA MND FONSI (04-2011), Ch 2, Sec 2.6.3.2, pg 2-44; MM U&ES-1	LAHD shall work in close coordination with the utility service providers in advance of construction activities to relocate affected utilities to minimize the impacts to the consumers.		
7-2	Utilities-TMP	LAHD/R.E.	One Time	Construction		IS/EA MND FONSI (04-2011), Ch 2, Sec 2.6.3.2, pg 2-44; MM U&ES-2	LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community similar to MM LU-1.		
NOISE ATTENUATION									
8-1	Noise Control	Construction Consultant/RE	As Needed	Construction	SSP# ?	IS/EA MND FONSI (04-2011), Ch 2, 2.16.5.2, pg 2-191; MM Noise-1	Noise control shall conform to the provisions in Section 14-8.02, "Noise Control", of the Standard Specifications and the special provisions see pages 2-176 - 2-179 of the IS/EA.		
AIR QUALITY									
9-1	Sustainable Construction Guidelines	Construction Consultant/RE	As Needed	Construction		IS/EA MND FONSI (04-2011), Ch 2, 2.15.5, pg 2-159; MM AQ-1 APP A - Attachment B	As part of the Port's commitment to promote sustainability programs, project construction would employ all applicable BMPs included in the LAHD's Sustainable Construction Guidelines. Project heavy-duty construction equipment shall use diesel oxidation catalyst and catalyzed diesel particulate filters, where feasible.		
HAZARDOUS MATERIALS INVESTIGATION/TREATMENT									
10-1	Hazardous Waste Clearance Affecting Advertising (Does the Haz Waste need to be moved, removed or processed under the construction contract?)	LA Harbor Dept/RE	On-Going	Construction		IS/EA MND FONSI (04-2011), Ch2, 2.14.4, pg 2-122; MM HM-1	Conduct Soil profiling while handling soil at the project site during construction. If the soil contains contaminant concentrations that meet the definition of the hazardous materials, then the contractor would be required to adhere to the Standard Specifications, which addresses the management of various hazardous materials and wastes consistent with the federal and state of California requirements pertaining to hazardous materials and wastes		
10-2	Water Contamination	Construction Contractor/RE	As Needed	Construction		IS/EA MND FONSI (04-2011), Ch2, 2.14.4, pg 2-122; MM HM-2	Collect and analyze water collected during dewatering for TPH gasoline/diesel and VOC's if a construction dewatering system is planned.		

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10-3	Soundwall Location Contamination	Construction Contractor/RE	One Time	Prior to or During Final Design		IS/EA MND FONSI (04-2011), Ch2, 2.14.4, pg 2-122; MM HM-3	Collect soil samples from the drilling of CIDH piles and analyze for CAM Title 22 Metals to determine proper off-site disposal, and/or re-use of this soil.		
10-4	Disposal of Hazardous Materials & Waste	Construction Contractor/RE	As Needed	Construction		IS/EA MND FONSI (04-2011), Ch2, 2.14.4, pg 2-122; MM HM-4	Dispose of any hazardous materials or wastes encountered before or during the construction phase of the project according to current regulatory guidelines.		
CONSTRUCTION									
11-1	Temporary Construction Easements (TCEs)	Community Impacts Specialist, Eric Dietrich/RE	One Time	Pre-Con and Con		IS/EA MND FONSI (10-2010), Chap 2, 2.3.3.1, pg 2-27 & 2.4.3.1, pg 2-31	Obtain TCEs from the front row of residential properties located east west, and south of the interchange for construction of soundwalls and retaining walls		
WATER QUALITY REQUIREMENTS									
12-1	Stormwater Pollution Prevention Plan (SWPPP)/Water Pollution Control Program (WPCP)	Gen., Eric Dietrich	As Needed	Pre, Con & Post	SSP#7-1/01G	IS/EA MND FONSI (04-2011), Ch 2, 2.11.3.1, pg 2-95	Prepare and implement an SWPPP and Monitoring Program prior to construction activities.		
12-2	Construction Site Erosion	Floodplain, Ralph Sasaki	As Needed	Pre, Con & Post		IS/EA MND FONSI (04-2011), Ch 2, 2.11.3.1, pg 2-95	Obtain an NPDES permit for stormwater discharges associated with construction activities .		
12-3	Permanent Storm Water Control Measures including Operations and Maintenance Information	Eric Dietrich/Ralph Sasaki/RE	As Needed	Pre, Con & Post		IS/EA MND FONSI (04-2011), Ch 2, 2.11.3.1, pg 2-96	Construct biofiltration swales with the ability to treat the flow from both existing and proposed paved surfaces within the project limits.		
12-4	Critical Temporary BMPs	Eric Dietrich/Ralph Sasaki/RE	As Needed	Pre-Con & Con		IS/EA MND FONSI (04-2011), Ch 2, 2.11.3.1, pg 2-95	SS-1 Scheduling, SS-2 Preservation of Existing Vegetation, SS-5 Soil Binders, SS-8 Temp Mulch, SS-9 Earth Dikes/Drainage Swales & Ditches, SC-1 Silt Fence, SC-5 Temp Fiber, SC-7 Street Sweeping, SC-10 Storm Drain inlet Protection, TC-1 Stabilized Const Entrance/Exit, NS-1 Water Conservation Practices, NS-6 Illicit Connection/Illegal Discharge Detection and Reporting, NS-8 Vehicle & Equip Cleaning, NS-9 Vehicle & Equip Cleaning, NS-10 Vehicle & Equip Maintenance, NS-12 Concrete Curing, WM-4 Material Delivery & Storage, WM-5 Solid Waste Management, WM-8 Concrete Waste Management, WM-9 Sanitary/Septic Waste Management, WM-10 Liquid Waste Management and Type D Erosion Control.		
Permits and Approvals Needed									
13-1	Regional Water Quality Control Board (RWQCB)-NPDES	Env Pln, Eric Dietrich	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	National Pollutant Discharge Elimination System (NPDES) Permit		
13-2	RWQCB - Groundwater Dewatering	Env Pln, Eric Dietrich	One Time	Construction		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Groundwater Dewatering Permit for discharge. Permit for discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Los Angeles.		
13-3	Federal Highway Administration (FHWA)	Air Quality, Andrew Yoon	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Air Quality Confirmation Determination		
13-4	Los Angeles Harbor Commission	Env Pln, Eric Dietrich	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Coastal Permit for construction within the Coastal Zone Area		
13-5	Public Utilities Commission (PUC)	Traffic, Kirk Patel	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Railroad realignment permit, B permit		
13-6	Ports of Los Angeles & Long Beach	Traffic, Kirk Patel	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Railroad License/Agreement for work within railroad RoW		
13-7	City of Los Angeles Permit	Traffic, Kirk Patel	One Time	Pre-Con		IS/EA MND FONSI (04-2011),Chap 1, 1.6 pg 1-21	Grading and construction permits		

Appendix H Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/kg	micrograms per kilogram
µg/m ³	micrograms per cubic meter
µPa	micro-Pascal
AADT	annual average daily traffic
AAM	annual arithmetic mean
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACMs	asbestos-containing materials
ACTA	Alameda Corridor Transportation Authority
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	average daily traffic
AEP	Association of Environmental Professionals
AER	Archaeological Evaluation Report
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
AQTR	Air Quality Technical Report
ASR	Archaeological Survey Report
AST	Aboveground Storage Tank Database
ASTM	American Society for Testing and Materials
bgs	below ground surface
BMPs	Best Management Practices
CA FID UST	Facility Inventory Database Underground Storage Tank
CA WDS	California Water Resources Control Board – Waste Discharge System
CAA	Clean Air Act
CAAAAs	Clean Air Act Amendments
CAAP	Clean Air Action Plan
CAAQS	California Ambient Air Quality Standards
CAL	calibration site

Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDL	Clandestine Drug Labs
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERC-NFRAP	Comprehensive Environmental Response Compensation and Liability Information System – No Further Remedial Action Planned
CESA	California Endangered Species Act
CFR	<i>Code of Federal Regulations</i>
CGS	California Geological Survey
CHMIRS	California Hazardous Material Incident Report System
CHP	California Highway Patrol
CHRIS	California Historic Resources Information System
CMP	corrugated metal pipe
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
Cortese	“Cortese” Hazardous Waste & Substances Sites List
COZEEP	Construction Zone Enforcement Enhancement Program
CPA	Community Plan Area
CRA/LA	Community Redevelopment Agency of the City of Los Angeles
CRHR	California Register of Historical Resources
CWA	Clean Water Act

CZMA	Coastal Zone Management Act of 1972
dB	decibel
dBA	A-weighted decibel
DDD	dichloro-diphenyl-dichloroethane
DDE	dichloro-diphenyl-dichloroethylene
DDT	dichloro-diphenyl-trichloroethane
DEIR	Draft Environmental Impact Report
DOT	Department of Transportation
DPM	diesel particulate matter
DRYCLEANERS	List of Dry Cleaners
EDR	Environmental Data Resources, Inc.
EMI	Emissions Inventory Data
ENVIROSTOR	EnviroStor Database
EO	Executive Order
EPA	United States Environmental Protection Agency
ERHA	Electric Railway Historical Association of Southern California
ERNS	Emergency Response Notification System
Ex Ph 1	Extended Phase I Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FINDS	Facility Index System/Facility Registry System
FIRMS	Flood Insurance Rate Maps
FOE	Finding of Effect
FTA	Federal Transit Administration
FY	fiscal year
GHG	greenhouse gas
GOs	General Orders
GWP	global warming potential
HAPs	hazardous air pollutants

HAZNET	Hazardous Waste Information System
HCM	Highway Capacity Manual
HEI	Health Effects Institute
HHS	United States Department of Health and Human Services
HIST UST	historical underground storage tank
HMIRS	Hazardous Material Information Reporting System
HPSR	Historic Property Survey Report
HRER	Historical Resources Evaluation Report
HSA	Hydrologic Sub-Area
Hz	Hertz
I-110	Interstate 110
ICIS	Integrated Compliance Information System
ICTF	intermodal container transfer facility
IGR	Intergovernmental Review
IPCC	Intergovernmental Panel on Climate Change
IRIS	Integrated Risk Information System
IS/EA	Initial Study/Environmental Assessment
ISA	Initial Site Assessment
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation Systems
kHz	kilohertz
LAANE	Los Angeles Alliance for a New Economy
LACDPW	Los Angeles County Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LAUSD	Los Angeles Unified School District
LBP	lead-based paint

lbs/day	pounds per day
LCPs	local coastal programs
L _{dn}	Day-Night Level
L _{eq}	Equivalent sound level
L _{eq(h)}	1-hour A-weighted equivalent sound level
L _{max}	Maximum sound level
L _n	Percentile-exceeded sound level
LOS	level of service
LPG	liquefied petroleum gas
LT	Long-term measurement
LUST	Leaking Underground Storage Tank Incident Reports
LUSTs	leaking underground storage tanks
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act
MCE	maximum credible earthquake
MEP	maximum extent practicable
MFR	multi-family residence
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
MI	Minimal Impacts
MLD	Most Likely Descendent
Mm	moment magnitude
MOA	Memorandum of Agreement
MND	Mitigation Negative Declaration
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MSATs	mobile source air toxics
MSL	mean sea level

MTA	Metropolitan Transportation Authority
MTCO ₂ e	metric tons CO ₂ e per year
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NATA	National Air Toxics Assessment
NB	Northbound
NCHRP	National Cooperative Highway Research Department
NCPP	New Community Plan Program
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHPA	National Historic Preservation Act of 1966
NO ₂	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSR	Noise Study Report
NTE	not-to-exceed
O ₃	Ozone
PA	Programmatic Agreement
PA/ED	Project Approval/Environmental Document
PAHs	polycyclic aromatic hydrocarbons
Pb	lead
PBA	peak bedrock acceleration
pc/mi/ln	passenger cars per miles per lane

PCBs	polychlorinated biphenyls
PCE	passenger car equivalent
PEAR	Preliminary Environmental Assessment Report
PGA	peak ground acceleration
PM	Post Mile
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PMP	Port Master Plan
POAQC	Projects of Air Quality Concern
POLA or Port	Port of Los Angeles
ppm	parts per million
PRC	Public Resources Code
PSR	Project Study Report
PUC	Public Utilities Commission
RAP	Relocation Assistance Program
RCES	Rail Crossing Engineering Section
RCP	reinforced concrete pipe
RCRA	Resource Conservation and Recovery Act of 1976
RCRA-LQG	Resource Conservation and Recovery Act – Large Quantity Generator
RCRA-SQG	Resource Conservation and Recovery Act – Small Quantity Generator
REC	recreational use
RECs	Recognized Environmental Conditions
ROW	right-of-way
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	southbound

SCAB or Basin	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCH	educational center
SER	Caltrans Standard Environmental Reference
SET	supplemental emission test
SFR	single-family residence
SHPO	State Historic Preservation Officer
SI	Site Investigation
SIP	State Implementation Plan
SLF	Sacred Lands File
SO ₂	sulfur dioxide
SO ₄ ²⁻	sulfates
SPL	sound pressure level
SR	State Route
SRAs	source/receptor areas
SSD	stopping sight distance
ST	short-term measurement
STIP	Statewide Transportation Improvement Program
STLC	soluble threshold limit concentration
STPs	shovel test pits
SUSMP	Standard Urban Stormwater Mitigation Plan
SWEEPS UST	Statewide Environmental Evaluation and Planning System Underground Storage Tank
SWF/LF	Solid Waste Information System/Landfill
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants

TASAS	Traffic Accident Surveillance and Analysis System
TCEs	Temporary Construction Easements
TCLP	Toxicity Characteristic Leaching Procedure
TCMs	Transportation Control Measures
TCWG	Transportation Conformity Working Group
TDCs	target design constituents
TDM	Transportation Demand Management
TeNS	Technical Noise Supplement (Caltrans)
TEUs	twenty-foot equivalent units
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TNM	Traffic Noise Model
TPH	total petroleum hydrocarbon
TSCA	Toxic Substance Control Act
TSM	Transportation Systems Management
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
v/c	volume to capacity
VCP	Voluntary Cleanup Program Properties
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WB	westbound

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Appendix I List of Technical Studies (Bound Separately)

- Air Quality Technical Report (Parsons, June 2010)
- Archaeological Survey Report (Ecorp, October 2009)
- Supplemental Archaeological Survey Report (Ecorp, January 2010)
- Archaeological Evaluation Report (Ecorp, August 2010)
- Extended Phase I Report (Ecorp, October 2009)
- Supplemental Extended Phase I Report (Ecorp, March 2010)
- Historic Property Survey Report (Ecorp, October 2009; Revised October 2010)
- Historical Resources Evaluation Report (Parsons, October 2009)
- Finding of Adverse Effect (Ecorp, December 2010)
- Supplemental Initial Site Assessment (Group Delta, Inc., January 2009)
- Phase II Site Investigation Report (Group Delta, Inc., November 2009)
- Supplemental Phase II Site Investigation Report (Group Delta, Inc., March 2011)
- Natural Environment Study (Parsons, May 2009)
- Memorandum of Biological Survey Results to Supplement Natural Environment Study (Parsons, December 2009)
- Noise Study Report (Parsons, March 2010)
- Addendum to Noise Study Report (Parsons, July 2010)
- Noise Abatement Decision Report (Parsons, April 2010; Revised September 2010)
- Storm Water Data Report (Parsons, September 2010)
- Traffic Analysis Report (Iteris, December 2009)

