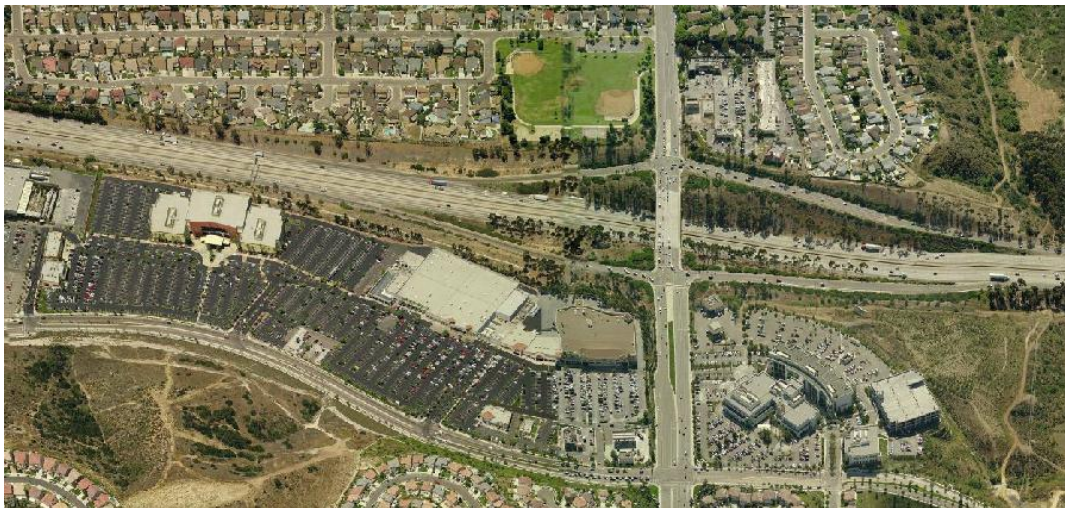


# Interstate 805/Palm Avenue Interchange Improvements

SAN DIEGO COUNTY, CALIFORNIA  
DISTRICT 11 – SD – 805 (PM I-805 2.6/3.2)  
EA No. 11-173700  
SCH# 2018101025

## Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact and Section 4(f) De Minimis Determination



Prepared by the  
State of California, Department of Transportation  
in Coordination with the City of San Diego

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



JUNE 2019





## General Information about This Document

### What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared in coordination with the City of San Diego this Initial Study (IS) with Mitigated Negative Declaration (MND)/Environmental Assessment (EA) with Finding of No Significant Impact (FONSI), which examines the potential environmental impacts of the alternatives being considered for the Project proposed by the City of San Diego located in Caltrans Right-of-Way in San Diego County, California. The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is also the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the Project is being proposed, what alternatives have been considered for the proposed Project, how the existing environment could be affected by the proposed Project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The IS/EA circulated to the public for 30 days between October 8, 2018 and November 7, 2018. Comments received during this period are included in Chapter 4. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. A copy of this document is available for review at the Caltrans District 11 office (4050 Taylor Street, San Diego, CA 92110).

### Alternative Formats:

For individuals with sensory disabilities, this document can be made available in braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, District 11, Attn: San Li, Environmental Division, 4050 Taylor Street, San Diego, CA 92110; (619) 688-3139 (Voice), or use the District 11 California Relay Service 619-688-6650 (TTY), or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

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Improve the Interstate 805/Palm Avenue Interchange in the City of San Diego, from 0.3 miles South to 0.3 miles North of Palm Avenue Overcrossing, (Post Mile 2.6 to Post Mile 3.2)

**Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment and Draft Section 4(f) De Minimis Determination**

Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 42 USC 4332(2)(C)  
and 49 USC 303, and/or 23 USC 138

THE STATE OF CALIFORNIA  
Department of Transportation

Responsible Agency: City of San Diego

10/2/2018  
Date

  
Bruce April  
District Deputy Director  
California Department of Transportation  
District 11  
NEPA and CEQA Lead Agency

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**CALIFORNIA DEPARTMENT OF TRANSPORTATION  
FINDING OF NO SIGNIFICANT IMPACT**

FOR

Interstate 805/Palm Avenue Interchange Improvements Project

EA No. 11-173700

The California Department of Transportation (Caltrans), in coordination with the City of San Diego, has determined that the Spread Diamond Interchange with Class IV Separated Bikeway (Alternative 2 + IV) will have no significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment (EA) which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed Project and 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 EA.

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

6/27/19  
Date

Bruce April  
Bruce April  
District Deputy Director  
California Department of Transportation  
District 11  
NEPA and CEQA Lead Agency



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**MITIGATED NEGATIVE DECLARATION**  
Pursuant to: Division 13, Public Resources Code

***Project Description***

The City of San Diego (City) proposes to improve the Interstate 805 (I-805)/Palm Avenue Interchange (Interchange). The proposed I-805/Palm Avenue Interchange Improvement Project (Project) would increase capacity at this Interchange to address the increase in local traffic that has occurred and is expected to occur in the future. The California Department of Transportation (Caltrans) is the lead agency under the National Environmental Policy Act (NEPA) on behalf of the Federal Highway Administration (FHWA) pursuant to 23 United States Code (USC) 327 because one of the considered Build Alternatives involved access modification of an interstate. Caltrans is also the lead agency under the California Environmental Quality Act (CEQA).

***Determination***

Caltrans has prepared an Initial Study for the Project, and following public review, has determined 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 agriculture and forest resources, greenhouse gases, land use and planning, mineral resources, hydrology, water quality, population and housing, cultural resources, and tribal cultural resources.

In addition, the proposed Project would have less than significant effects on aesthetics, air quality, geology and soils, noise, recreation, and public services.

With the following mitigation measures incorporated, the proposed Project would have less than significant effects on the following resources:

**Biological Resources**

- Revegetation of impacted area with native species

**Hazardous Materials**

- Observations of excavation for contamination
- Proper handling of undocumented subsurface features
- Review of as-built drawings for asbestos and lead
- Conducting an asbestos and lead survey prior to beginning construction
- Sampling and management of contaminated soil
- Preparation of a project specific health and safety plan to protect worker exposure to hazardous materials

**Hydrology and Water Quality**

- Implementation of stormwater Best Management Practices (BMPs)

**Paleontology**

- Implementation of a Paleontological Mitigation Plan (PMP) to reduce construction-related impacts

**Transportation/Traffic**

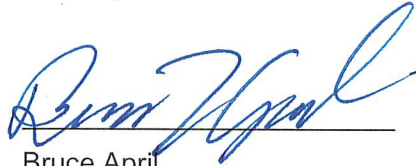
- Implementation of a Transportation Management Plan (TMP)

Utilities and Service Systems

- Implementation of proper Construction Site, Design Pollution Prevention and Treatment BMPs for impacted stormwater facilities
- Construction of stormwater facilities at the earliest phase possible
- Implementation of visual monitoring for stormwater discharge during construction
- Sampling and analysis for non-visible pollutants in the case of prior site contamination or if any spill was observed during construction site inspection

6/29/19

Date



Bruce April  
District Deputy Director  
California Department of Transportation  
District 11  
NEPA and CEQA Lead Agency

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<b>1 CHAPTER 1 – PROPOSED PROJECT .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Purpose and Need .....	5
1.2.1 Purpose of the Project.....	5
1.2.2 Need for the Project .....	5
Capacity and Transportation Demand .....	5
Roadway Deficiencies .....	7
Air Quality Improvements .....	7
Independent Utility and Logical Termini.....	7
1.3 Project Description .....	11
1.3.1 Project Background.....	11
1.4 Alternatives .....	12
1.4.1 Project Alternatives .....	12
Common Design Features of the Build Alternatives.....	12
Unique Features of Build Alternative 1 + IV: One Quad Partial Cloverleaf with Class IV Separated Bikeway .....	17
Unique Features of Alternative 2 + IV: Spread Diamond with Class IV Separated Bikeway.....	18
Transportation Demand Management, Transportation System Management, and Mass Transit Alternatives .....	19
No Build Alternative .....	20
1.4.2 Comparison of Alternatives .....	25
1.4.3 Identification of a Preferred Alternative .....	28
1.4.4 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Initial Study/Environmental Assessment (IS/EA) .....	28
1.5 Permits and Approvals Needed .....	29
<b>2 CHAPTER 2 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES .....</b>	<b>31</b>
2.1 HUMAN ENVIRONMENT .....	31
2.1.1 Land Use.....	31
Existing and Future Land Use .....	31
Environmental Consequences .....	35
Avoidance, Minimization, and/or Mitigation Measures .....	37
Consistency with State, Regional, and Local Plans and Programs ..	37
Environmental Consequences .....	38
Avoidance, Minimization, and/or Mitigation Measures .....	38
Parks and Recreational Facilities.....	45
Regulatory Setting .....	45
Affected Environment .....	45
Environmental Consequences .....	46
Avoidance, Minimization, and/or Mitigation Measures .....	53
2.1.2 Growth .....	57
Regulatory Setting.....	57
Affected Environment .....	57
Environmental Consequences .....	57
Avoidance, Minimization, and/or Mitigation Measures .....	58
2.1.3 Community Impacts.....	58
Community Character and Cohesion.....	58
Regulatory Setting.....	58

	Affected Environment .....	59
	Environmental Consequences .....	65
	Avoidance, Minimization, and/or Mitigation Measures .....	65
	Relocations and Real Property Acquisition .....	65
	Regulatory Setting .....	65
	Affected Environment .....	66
	Environmental Consequences .....	66
	Avoidance, Minimization, and/or Mitigation Measures .....	67
	Environmental Justice .....	67
	Regulatory Setting .....	67
	Affected Environment .....	68
	Environmental Consequences .....	68
	Avoidance, Minimization, and/or Mitigation Measures .....	69
2.1.4	Utilities/Emergency Services .....	71
	Affected Environment .....	71
	Environmental Consequences .....	71
	Avoidance, Minimization, and/or Mitigation Measures .....	72
2.1.5	Traffic and Transportation/Pedestrian and Bicycle Facilities .....	73
	Regulatory Setting .....	73
	Affected Environment .....	73
	Environmental Consequences .....	77
	Avoidance, Minimization, and/or Mitigation Measures .....	92
2.1.6	Visual/Aesthetics .....	94
	Regulatory Setting .....	94
	Affected Environment .....	94
	Environmental Consequences .....	105
	Avoidance, Minimization, and/or Mitigation Measures .....	110
2.2	PHYSICAL ENVIRONMENT .....	114
2.2.1	Hydrology and Floodplain .....	114
	Regulatory Setting .....	114
	Affected Environment .....	114
	Environmental Consequences .....	115
	Avoidance, Minimization, and/or Mitigation Measures .....	119
2.2.2	Water Quality and Storm Water Runoff .....	119
	Regulatory Setting .....	119
	Affected Environment .....	123
	Environmental Consequences .....	124
	Avoidance, Minimization, and/or Mitigation Measures .....	126
2.2.3	Geology/Soils/Seismic/Topography .....	126
	Regulatory Setting .....	126
	Affected Environment .....	127
	Environmental Consequences .....	129
	Avoidance, Minimization, and/or Mitigation Measures .....	130
2.2.4	Paleontology .....	130
	Regulatory Setting .....	130
	Affected Environment .....	130
	Environmental Consequences .....	132
	Avoidance, Minimization, and/or Mitigation Measures .....	133
2.2.5	Hazardous Waste/Materials .....	137
	Regulatory Setting .....	137
	Affected Environment .....	137
	Environmental Consequences .....	139
	Avoidance, Minimization, and/or Mitigation Measures .....	140
2.2.6	Air Quality .....	141



	Regulatory Setting .....	141
	Affected Environment .....	142
	Environmental Consequences .....	143
	Avoidance, Minimization, and/or Mitigation Measures .....	153
2.2.7	Noise .....	154
	Regulatory Setting .....	154
	Affected Environment .....	157
	Environmental Consequences .....	163
	Avoidance, Minimization, and/or Abatement Measures .....	164
2.3	<b>BIOLOGICAL ENVIRONMENT</b> .....	170
2.3.1	Natural Communities .....	170
	Affected Environment .....	170
	Environmental Consequences .....	171
	Avoidance, Minimization, and/or Mitigation Measures .....	175
2.3.2	Plant Species .....	176
	Regulatory Setting .....	176
	Affected Environment .....	176
	Environmental Consequences .....	176
	Avoidance, Minimization, and/or Mitigation Measures .....	177
2.3.3	Animal Species .....	177
	Regulatory Setting .....	177
	Affected Environment .....	178
	Environmental Consequences .....	178
	Avoidance, Minimization, and/or Mitigation Measures .....	179
2.3.4	Threatened and Endangered Species .....	179
	Regulatory Setting .....	179
	Affected Environment .....	180
	Environmental Consequences .....	182
	Avoidance, Minimization, and/or Mitigation Measures .....	185
2.3.5	Invasive Species .....	185
	Regulatory Setting .....	185
	Affected Environment .....	185
	Environmental Consequences .....	185
	Avoidance, Minimization, and/or Mitigation Measures .....	186
2.4	Construction Impacts .....	187
	Affected Environment .....	187
	Environmental Consequences .....	187
	Avoidance, Minimization, and/or Mitigation Measures .....	187
2.5	Cumulative Impacts .....	187
	Regulatory Setting .....	187
	Affected Environment .....	188
	Environmental Consequences .....	188
	Avoidance, Minimization and/or Mitigation Measures .....	188
<b>3</b>	<b>CHAPTER 3 – CALIFORNIA ENVIRONMENTAL QUALITY ACT EVALUATION .....</b>	<b>189</b>
3.1	Determining Significance Under CEQA .....	189
3.2	CEQA Environmental Checklist .....	189
	Aesthetics .....	190
	Agriculture and Forest Resources .....	191
	Air Quality .....	192
	Biological Resources .....	194
	Cultural Resources .....	197
	Geology and Soils .....	198
	Greenhouse Gas Emissions .....	200

	Hazards and Hazardous Materials.....	201
	Hydrology and Water Quality.....	203
	Land Use and Planning.....	206
	Mineral Resources.....	207
	Noise.....	208
	Population and Housing.....	210
	Public Services.....	211
	Recreation.....	212
	Transportation/Traffic.....	213
	Tribal Cultural Resources.....	215
	Utilities and Service Systems.....	216
	Mandatory Findings of Significance.....	218
3.3	Climate Change.....	219
	Regulatory Setting.....	219
	Environmental Setting.....	222
	Project Analysis.....	223
	Operational Emissions.....	224
	Construction Emissions.....	227
	CEQA Conclusion.....	227
	Greenhouse Gas Reduction Strategies.....	231
	Adaptation Strategies.....	233
<b>4</b>	<b>CHAPTER 4 – COMMENTS AND COORDINATION.....</b>	<b>235</b>
4.1	Introduction.....	235
4.2	Public Scoping Process.....	235
	4.2.1 Public Scoping Meeting.....	235
	4.2.2 Additional Project Outreach.....	235
4.3	Project Development Team Meetings.....	236
4.4	Agency Coordination.....	237
	4.4.1 Initiation of Agency Participation.....	237
4.5	Public Participation Process.....	238
	4.5.1 Public Meeting.....	241
	4.5.2 Public Comments at the Public Meeting.....	241
4.6	Additional Consultation and Coordination with Public Agencies.....	241
	4.6.1 U.S. Fish and Wildlife Consultation Under Section 7 of the Federal Endangered Species Act of 1973.....	241
4.7	Comments and Response to Comments.....	241
	4.7.1 Comment and Response to Letter 1: State Clearinghouse.....	242
	4.7.2 Comment and Response to Letter 2: Viejas Tribal Government.....	245
	4.7.3 Comment and Response to Letter 3: California Department of Fish and Wildlife.....	247
<b>5</b>	<b>CHAPTER 5 – LIST OF PREPARERS.....</b>	<b>255</b>
<b>6</b>	<b>CHAPTER 6 – DISTRIBUTION LIST.....</b>	<b>259</b>
	<b>LIST OF TECHNICAL STUDIES.....</b>	<b>267</b>

**APPENDICES**

A Section 4(f) with de Minimis Determination ..... A-1  
B Title VI Policy Statement ..... B-1  
C Avoidance, Minimization and/or Mitigation Summary ..... C-1  
D List of Acronyms ..... D-1  
E Excerpts from the RTP and RTIP ..... E-1  
F U.S. Fish and Wildlife Service and NOAA Fisheries Service Threatened and  
Endangered Species Lists ..... F-1  
G Federal Highway Administration Air Quality Conformity Determination ..... G-1

## List of Tables

Table 1.3.1 Project Phasing .....	12
Table 1.4.1 Alternatives Comparison .....	25
Table 1.5.1 List of Permits and Approvals Needed.....	29
Table 2.1.1 Major Developments within the Proposed Project Vicinity .....	35
Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs .....	39
Table 2.1.3 Parks Located in the Project Vicinity.....	46
Table 2.1.4 Existing Regional and Local Population Characteristics—Race/Ethnicity .....	61
Table 2.1.5 Existing Regional and Local Housing Characteristics—Age .....	63
Table 2.1.6 Existing Regional and Local Housing Characteristics—Occupancy .....	63
Table 2.1.7 Existing Regional and Local Housing Characteristics—Tenure .....	64
Table 2.1.8 Anticipated Property Acquisition .....	66
Table 2.1.9 Existing Regional and Local Income and Ethnic Characteristics.....	68
Table 2.1.10 Potential Impacts Affecting Environmental Justice Populations .....	70
Table 2.1.11 Utilities Impacted by Proposed Construction .....	71
Table 2.1.12 Existing Conditions Peak Hour Intersection LOS Summary .....	78
Table 2.1.13 Existing Conditions Peak Hour Signalized Interchange and Signalized Intersection ILV Summary.....	79
Table 2.1.14 Existing Conditions Roadway Segment Analysis Summary .....	79
Table 2.1.15 Alternative 1 + IV and No Build Peak Hour Intersection LOS Summary .....	85
Table 2.1.16 Alternative 1 + IV and No Build Peak Hour ILV Summary.....	86
Table 2.1.17 No Build Roadway Segment Analysis Summary.....	87
Table 2.1.18 Alternative 2 + IV and No Build Peak Hour Intersection LOS Summary .....	88
Table 2.1.19 Alternative 2 + IV and No Build Peak Hour ILV Summary.....	89
Table 2.2.1 Disturbed Soil Area and Impervious Area of the Proposed Project .....	125
Table 2.2.2 Water Quality Flow Rates.....	125
Table 2.2.3 State and Federal Criteria Air Pollutant Standards, Effects, and Sources .....	145
Table 2.2.4 Status of State Implementation Plans in the San Diego Air Basin.....	147
Table 2.2.5 CO "Hot Spots" Modeling Results (Maximum CO Concentrations, ppm) .....	149
Table 2.2.6 Noise Abatement Criteria (NAC).....	155
Table 2.2.7 Existing and Predicted Future Noise Levels and Abatement Feasibility Analysis..	161
Table 2.2.8 Construction Equipment Noise .....	164
Table 2.2.9 Receptors Benefitted by Soundwall Alternatives.....	166
Table 2.2.10 Existing Versus Future Noise Levels .....	169
Table 2.3.1 Listed Species within the General Biological Study Area .....	180
Table 2.3.2 Invasive Plants Observed within the General Biological Study Area .....	186
Table 2.5.1 Major Developments within the Proposed Project Vicinity .....	188
Table 3.3.1 Modeled Annual CO <sub>2</sub> Emissions and Vehicle Miles Traveled, by Alternative .....	226
Table 3.3.2 Daily Construction Emissions Estimates for Alternative 1 + IV.....	229
Table 3.3.3 Total Construction Emissions Estimates for Alternative 1 + IV.....	229
Table 3.3.4 Daily Construction Emissions Estimates for Alternative 2 + IV.....	230
Table 3.3.5 Total Construction Emissions Estimates for Alternative 2 + IV.....	230
Table 4.2.1 Project Public Outreach.....	235
Table 4.4.1 Agency Coordination Record.....	237
Table 4.7.1 Summary of Comment Letters Received During the Public Comment Period.....	241

# List of Figures

Figure 1.1.1 Project Vicinity and Location Map.....	2
Figure 1.1.2 Project Study Area .....	3
Figure 1.2.1 Levels of Service for Intersections with Traffic Signals .....	6
Figure 1.2.2 Existing Condition Palm Avenue Bridge Typical Cross-Section .....	9
Figure 1.2.3 Existing Condition Palm Avenue Roadway Typical Section .....	10
Figure 1.4.1 Alternative 1 + IV Project Features .....	15
Figure 1.4.2 Alternative 2 + IV Project Features .....	16
Figure 1.4.3 Alternative 1 + IV Palm Avenue Bridge Typical Cross-Section .....	21
Figure 1.4.4 Alternative 1 + IV Palm Avenue Roadway Typical Section .....	22
Figure 1.4.5 Alternative 2 + IV Palm Avenue Bridge Typical Cross-Section .....	23
Figure 1.4.6 Alternative 2 + IV Palm Avenue Roadway Typical Section .....	24
Figure 2.1.1 Existing Land Use .....	33
Figure 2.1.2 Zoning .....	34
Figure 2.1.3 Otay Mesa Community Plan Precise and Specific Plan Area .....	36
Figure 2.1.4 Parks and Recreational Facilities Near Project Area .....	47
Figure 2.1.5 Palm Ridge Neighborhood Park .....	48
Figure 2.1.6 Recreational Elements of Palm Ridge Neighborhood Park.....	49
Figure 2.1.7 Other Facilities of Palm Ridge Neighborhood Park.....	50
Figure 2.1.8 Park Slope Affected by Retaining Wall & Park Area Affected by Pipeline Relocation Looking Southward .....	51
Figure 2.1.9 Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 1 + IV .....	55
Figure 2.1.10 Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 2 + IV .....	56
Figure 2.1.11 Census Tracts within the Proposed Project Area.....	60
Figure 2.1.12 Project Traffic Study.....	75
Figure 2.1.13 Existing ADT and Peak Hour Turning Movement Volumes.....	76
Figure 2.1.14 Year 2020 ADT and Peak Hour Turning Movement Volumes .....	80
Figure 2.1.15 Year 2040 ADT and Peak Hour Turning Movement Volumes .....	81
Figure 2.1.16 Simulation #1 – Key Views Looking Northwest on Interstate 805 Northbound .....	97
Figure 2.1.17 Simulation #2 – Key Views Looking Southwest on Palm Avenue Westbound.....	98
Figure 2.1.18 Simulation #3 – Key Views Looking East from Palm Ridge Park .....	99
Figure 2.1.19 Simulation #4 – Key Views Looking West on Palm Avenue Westbound .....	100
Figure 2.1.20 Simulation #5 – Key Views Looking North on Interstate 805 Northbound .....	101
Figure 2.1.21 Simulation #6 – Key Views Looking West on Palm Avenue Westbound.....	102
Figure 2.1.22 Simulation #7 – Key Views Looking Southeast on Palm Avenue Westbound .....	103
Figure 2.2.1 Drainage and Storm Drain System in the Proposed Project Area .....	117
Figure 2.2.2 Flood Insurance Rate Map of the Proposed Project Area.....	118
Figure 2.2.3 Geology of the Proposed Project Area .....	135
Figure 2.2.4 Location of CO “Hot Spot” Evaluation.....	148
Figure 2.2.5 Noise Levels of Common Activities .....	156
Figure 2.2.6 Noise Monitoring and Receptor Locations (Southwest and Southeast Quadrants) .....	158
Figure 2.2.7 Noise Monitoring and Receptor Locations (Northwest, Northeast, and Southeast Quadrants).....	159
Figure 2.2.8 Noise Monitoring and Receptor Locations (Northeast Quadrant).....	160
Figure 2.2.9 Alignment of Noise Barrier NB-1 Alternative A .....	167
Figure 2.2.10 Alignment of Noise Barrier NB-1 Alternative B.....	168
Figure 2.3.1 Vegetation within the General Biological Study Area .....	173
Figure 2.3.2 Approximate Locations of Least Bell’s Vireo.....	183
Figure 2.3.3 Approximate Locations of Coastal California Gnatcatchers .....	184
Figure 3.3.1 2020 Business as Usual (BAU) Emissions Projection 2014 Edition .....	223



Figure 3.3.2 Possible Use of Traffic Operation Strategies in Reducing On-Road CO2 Emissions .....	224
Figure 3.3.3 The Governor’s Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals .....	231
Figure 4.5.1 Notice of Public Hearing/Notice of Availability Newspaper Advertisement .....	240

# 1 Chapter 1 – Proposed Project

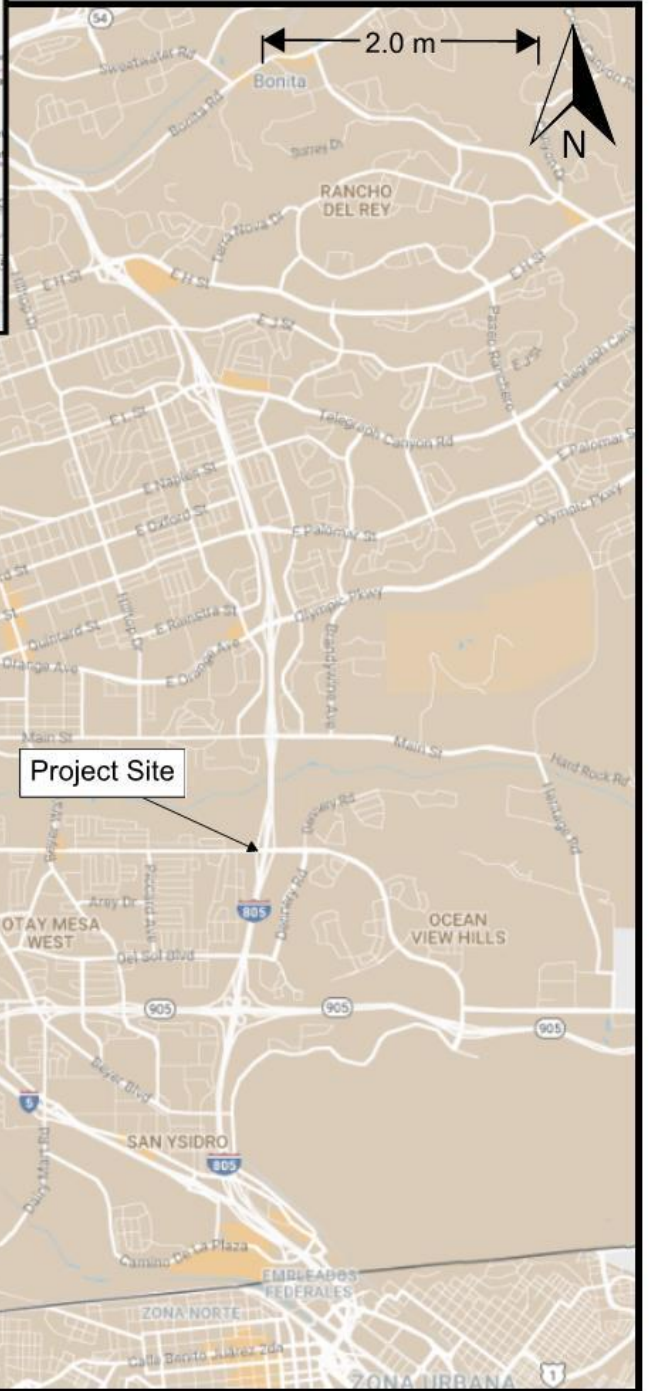
## NEPA Assignment

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary’s responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

### 1.1 Introduction

The City of San Diego (City) proposes to improve the Interstate 805 (I-805)/Palm Avenue Interchange (Interchange). The proposed I-805/Palm Avenue Interchange Improvement Project (Project) would increase capacity at this Interchange to address the increase in local traffic that has occurred and is expected to occur in the future. The California Department of Transportation (Caltrans) is the lead agency under the National Environmental Policy Act (NEPA) on behalf of the Federal Highway Administration (FHWA) pursuant to 23 United States Code (USC) 327 because one of the considered Build Alternatives involved access modification of an interstate. Caltrans is also the lead agency under the California Environmental Quality Act (CEQA). **Figure 1.1.1** shows the Project Vicinity and Location Map. **Figure 1.1.2** shows the Project Study Area. The proposed Project is located at I-805 Post Mile 2.6-3.2 in the part of the City of San Diego that is south of the City of Chula Vista. At this location, Palm Avenue crosses west-east nearly 40 feet above I-805 on a bridge that has two through lanes in each direction and two lanes dedicated to back-to-back dual left turn lanes.

This proposed Project is included in the Revenue Constrained scenario of the 2050 Regional Transportation Plan (RTP) approved by the San Diego Association of Governments (SANDAG) Board of Directors on October 9, 2015. The proposed Project is listed in Table B.15 pages 40-41 of the RTP. The proposed Project is also included in the 2018 Regional Transportation Improvement Program (RTIP) approved by the SANDAG Board of Directors on September 28, 2018 and federally approved on December 17, 2018. The RTIP entry for the proposed Project is recorded as MPO ID SD190 Palm Avenue/Interstate 805 Interchange in Table 3-1 page 3-105, and Table F-13 pages F-34 and F-37. The design concept and scope of the proposed Project is consistent with the project description in the 2050 RTP and the 2018 RTIP, and with identified local funding (See relevant pages from the RTP and RTIP in **Appendix E**). The proposed Project is expected to be 100 percent funded by the City of San Diego through the Otay Mesa East and Otay Mesa West Facilities Benefit Assessment (FBA).



**Figure 1.1.1**  
**Project Vicinity and Location Map**





Figure 1.1.2  
Project Study Area



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## 1.2 Purpose and Need

### 1.2.1 Purpose of the Project

The primary purpose of the proposed Project is to accomplish the following:

- Reduce congestion during peak periods;
- Reduce delay on Palm Avenue at the Interchange and adjacent signalized intersections;
- Increase traffic signal storage lengths to prevent conflicts between turn and through movements;
- Increase on-ramp storage to enhance Interchange and freeway operations;
- Incorporate “Complete Streets” concepts within the context of the community. "Complete Street" is defined by Caltrans as "A transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the function and context of the facility;"
- Incorporate features that accommodate high-occupancy vehicle (HOV) and transit operations;
- Incorporate features that accommodate local traffic resulting from the implementation of the Otay Mesa Community Plan and allow transportation goals of the Otay Mesa Community Plan to be met; and
- Upgrade bridge approaches to address structural integrity.

### 1.2.2 Need for the Project

#### Capacity and Transportation Demand

The ability of roadways and intersections to carry traffic is expressed in terms of Level of Service (LOS). The various levels for signalized intersections are explained in **Figure 1.2.1**. The capacity of the bridge in terms of the existing number of lanes and length of turn pockets is deficient. In certain locations, and at peak times, this causes the following transportation problems that currently exist and are expected to worsen in the future:

- Substantial queues hinder vehicles accessing the I-805 South on-ramp from Palm Avenue; at this location, the westbound (WB) left-turn pockets spill beyond their capacity and block WB through traffic, stopping traffic in the through lanes;
- Substantial queues also hinder vehicles accessing the I-805 North on-ramp from Palm Avenue; at this location, the WB right-turn pocket does not have enough storage for the demand. In addition, the eastbound (EB) left-turn pockets spill beyond their capacity and block EB through traffic, stopping traffic in the through lanes; and
- The roadway segments along Palm Avenue between Firethorn Street and I-805 South ramps have daily traffic volumes above existing roadway capacity.

# LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
<b>A</b>	$\leq 10$
<b>B</b>	11-20
<b>C</b>	21-35
<b>D</b>	36-55
<b>E</b>	56-80
<b>F</b>	>80

**Factors Affecting LOS of Signalized Intersections**

**Traffic Signal Conditions:**

- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

**Geometric Conditions:**

- Left- and right-turn lanes
- Number of lanes
- Etc.

**Traffic Conditions:**

- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections

**Figure 1.2.1**  
**Levels of Service for Intersections with Traffic Signals**

Future traffic volumes are projected to increase along Palm Avenue, causing the following additional transportation problems:

- The left-turn pocket on the I-805 South off-ramp could fill and block traffic attempting to access the off-ramps;
- The right-turn pocket on the I-805 North off-ramp would spill beyond its storage pocket and may prevent left-turning vehicles from reaching the intersection, with the queue having the potential to back up beyond the extent of the off-ramp and affect traffic flow on I-805;
- Future delays in Year 2040 at the I-805 North on-ramp would exceed 55 seconds, which is the threshold for delay to be classified as unacceptable (LOS E); and

- Future traffic volumes would result in inefficient weaving on I-805 North and South between SR-905 through Main Street and would cause ramp metering on the north on-ramp to create average delays over 40 minutes. Traffic volumes exceed LOS D capacity in both the Year 2020 and Year 2040 forecasts.

This information is based on information provided in the "Traffic Operational Analysis, I-805/Palm Avenue Interchange," (Traffic Study) dated July 2014. Traffic volumes are expected to reflect growing populations in San Diego County. The San Diego Region is expected to grow by 4,384,867 by 2050 according to forecasts created by SANDAG, thus increasing demand for roadways.

### **Roadway Deficiencies**

The I-805/Palm Avenue Interchange was originally constructed in 1973 in a spread diamond configuration. The bridge consists of six 12-foot-wide lanes with two 5-foot-wide bike lanes adjacent to 5-foot-wide sidewalks. The signalization of the ramps and the widening improvements to provide back-to-back turn lanes were constructed in the late 1990s. No other improvements have been made since this initial "Phase I" improvement. This geometry is not an adequate cross-section for existing and future traffic volumes, resulting in the operational deficiencies discussed above. Improvements in roadway geometry that would help correct the operational deficiencies include longer turn pockets, additional turn lanes, and additional lanes on freeway ramps.

A continual roadway maintenance issue exists on Palm Avenue at the bridge approaches where the asphalt exhibits signs of distress and fatigue at both ends of the overcrossing. These segments need to be removed and replaced. Also, an existing joint in the first two spans of the bridge is vertically offset (higher on one side) by up to 1.5 inches. This joint should be removed and replaced to match the height on each side, thus eliminating the offset. A preliminary seismic evaluation of the existing structure ruled that the current state of the bridge would not sufficiently withstand seismic activity. **Figure 1.2.2** shows a cross-section of the existing bridge condition. **Figure 1.2.3** shows a typical roadway cross-section of the existing roadway condition.

### **Air Quality Improvements**

The City of San Diego (City) has committed to reducing Greenhouse Gas (GHG) emissions in its Climate Action Plan (CAP) approved in December 2015. In its Climate Action Plan Fiscal Year 2017 Funding & Implementation Report, the City determined that successful implementation of the CAP

“...will 1) help the State of California achieve its emissions reduction target by contributing to GHG reductions, 2) prepare for anticipated climate change impacts in the coming decades, and 3) have a positive impact on the regional economy and San Diegans” (City of San Diego 2017).”

The CAP identifies goals and actions in five strategic areas to reach or exceed GHG emissions reduction targets. One strategic area is Bicycling, Walking, Transit and Land Use, defined as “maximizing the most fuel-efficient forms of transportation (e.g., biking, walking, and transit combinations), and reducing the need to travel, through updated land use planning and implementation of existing plans.” Providing new and improved bike facilities, including cycle tracks, is part of the City’s implementation strategy to increase commuting by bicycle. Roadway geometry, which includes the enhanced facilities of “Complete Streets” for pedestrians and bicyclists, helps increase walking and biking, reduces vehicle travel, and improves air quality.

### **Independent Utility and Logical Termini**

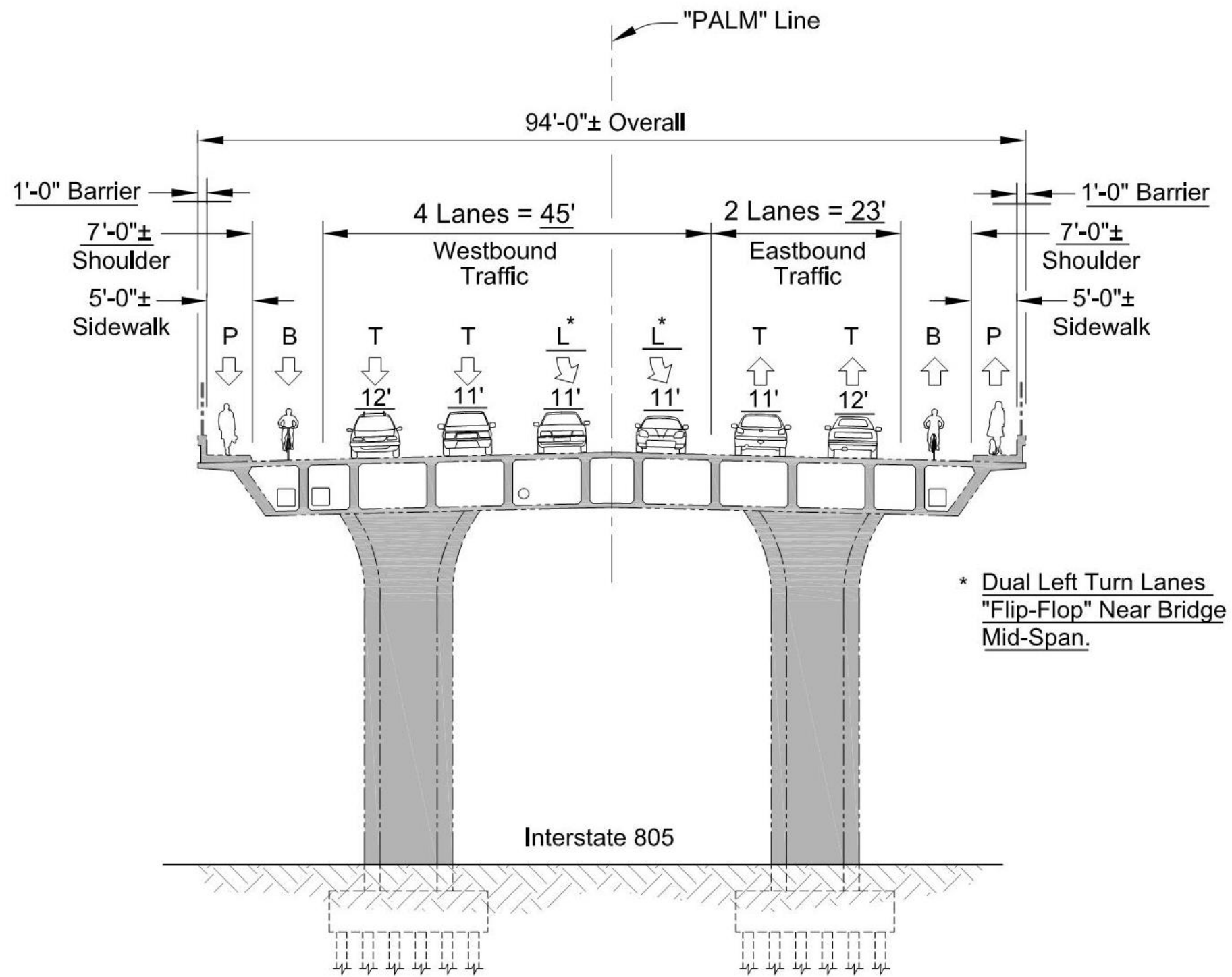
“Logical Termini” is defined as 1) rational end points for a transportation improvement, and 2) rational end points for a review of environmental impacts. It is important for proposed Project boundaries to encompass the entire area needed to solve the transportation problem and the entire area potentially affected by proposed Project construction and operation.

Segmentation may arise if a transportation need extends throughout an entire corridor, but environmental issues and transportation needs are discussed for only a part of the corridor.

The proposed Project has logical termini because the end points have been defined as Firethorn Street and Dennery Road at Palm Avenue on the west and east, and the farthest extent of proposed ramp improvements associated with the I-805/Palm Avenue Interchange on the north and south. These boundaries include the essential elements of the proposed Project and encompass the area potentially affected by proposed Project construction and operation. The end points are rational because a meaningful transportation improvement would be accomplished, and environmental impacts would be addressed without segmentation. See **Figure 1.1.2** for the proposed Project Study Area.

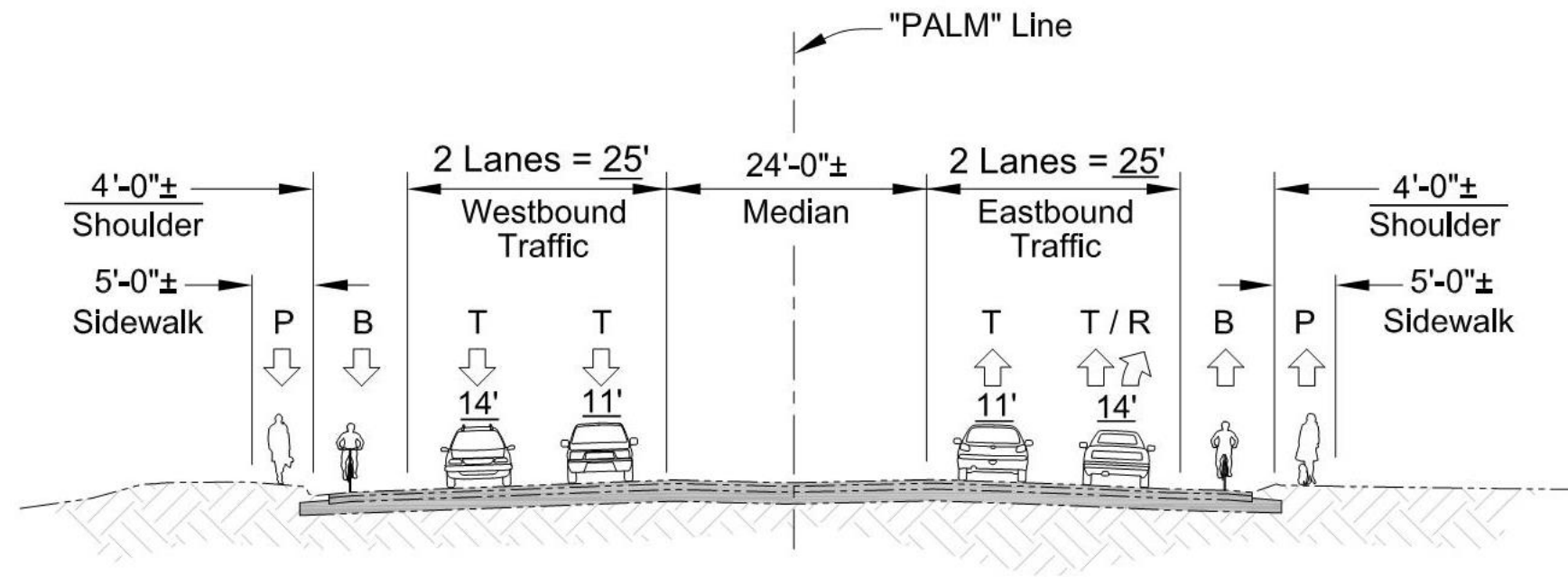
The proposed Project has independent utility because it would result in improved traffic conditions at the I-805/Palm Avenue Interchange and does not depend on the development of other projects to maintain or improve the traffic conditions. The proposed Project features would therefore be usable even if no other transportation improvements are made. The proposed Project also would represent a reasonable expenditure of Otay Mesa East and Otay Mesa West Facilities Benefit Assessment (FBA) funds.

The proposed Project would not restrict consideration of alternatives for other transportation improvements in the I-805 corridor or along Palm Avenue because proposed Project boundaries are confined to the immediate area of the I-805/Palm Avenue Interchange.

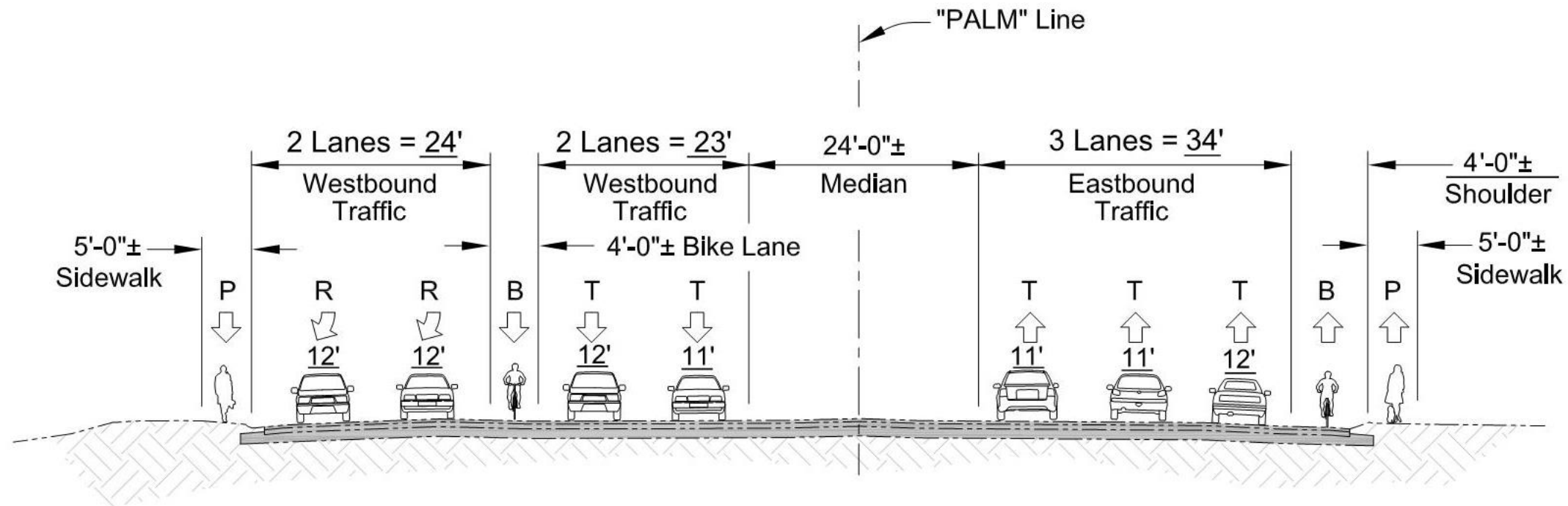


Existing Condition (Looking East / Upstation) on Bridge  
 Not to Scale

Figure 1.2.2  
 Existing Condition Palm Avenue Bridge Typical Cross-Section



Existing Condition (Looking East / Upstation) West of I-805  
 Not to Scale



Existing Condition (Looking East / Upstation) East of I-805  
 Not to Scale

Figure 1.2.3

Existing Condition Palm Avenue Roadway Typical Section

## 1.3 Project Description

This section describes the project background as well as the proposed Project alternatives that were developed to meet the identified purpose and need of the proposed Project, while avoiding or minimizing environmental impacts. The Build Alternatives are Alternative 1 + IV (One Quad Partial Cloverleaf with Class IV Separated Bikeway) and Alternative 2 + IV (Spread Diamond with Class IV Separated Bikeway). The No Build Alternative is also described in this section.

The proposed Project is located at the I-805/Palm Avenue Interchange within the City of San Diego south of Chula Vista. The proposed Project includes work within the State Right-of-Way along the I-805 main lines and I-805/Palm Avenue Interchange ramps at Post Mile limits 2.6-3.2. The City is coordinating project planning, environmental documentation, and engineering design with Caltrans District 11. Proposed Project work would include widening the existing overcrossing, adding one through lane in the EB direction on the bridge, widening and realigning the highway ramps, and widening and realigning approach roadways.

Both Build Alternatives evaluated include a sidewalk and a Class IV Separated Bikeway on each side of Palm Avenue over I-805. A Class IV Separated Bikeway is defined as “a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking” (Caltrans 2015 Design Information Bulletin Number 89). At the time when the technical studies were performed and at the time of the publication of the Draft IS/EA, this type of bicycle facility was referred to as a Class IV Cycle Track.

Construction is anticipated to begin in 2022. Both Build Alternatives involve phasing of construction, where an initial phase is anticipated to be completed by 2024 and remaining ultimate proposed Project features are anticipated to begin in 2028 and be completed by 2030.

### 1.3.1 Project Background

The I-805/Palm Avenue Interchange was originally constructed in 1973 in a spread diamond configuration. Currently, the bridge is comprised of two through lanes in each direction with back-to-back dual left turn lanes in each direction.

In 1994, Caltrans prepared a Project Study Report/ Project Report (PSR/PR) and a Project Study Report (PSR) for proposed improvements to the I-805/Palm Avenue Interchange. Improvements included in the PSR/PR included signalization of the ramp intersections, widening of the southbound off-ramp, and widening of the bridge and approach. Additional approach widening, bridge widening, and ramp improvements were proposed as part of the PSR. Of the improvements proposed in the PSR, only Phase I, the signalization of the ramp intersections was performed.

In 2008, the City, in coordination with Caltrans, initiated Phase II and Phase III. Both Phase II and Phase III include bridge widening and approach modification. Information for project phasing in the case of each Build Alternative can be found in **Table 1.3.1**. This document has been prepared to reflect the Ultimate (Phase II & III) Project conditions and will discuss environmental impacts of final improvements for either Build Alternative.

**Table 1.3.1 Project Phasing**

<b>Year Completed</b>	<b>Phase</b>	<b>Description</b>
1994	Phase I	Signalized and improved Palm Avenue intersections, widened southbound off-ramp and bridges, and minor approach modifications.
Anticipated to be completed in <u>2024</u>	Phase II	Proposed widening of Palm Avenue, one side of the Palm Avenue Bridge and improvements on the I-805 on-ramps and off-ramps.
Anticipated to be completed in 2030	Phase III	Remaining proposed improvements from the PR that were not included in the previous phases. This includes widening the other side of the Palm Avenue Bridge and improving the remaining ramps.

## 1.4 Alternatives

### 1.4.1 Project Alternatives

The two Build Alternatives would increase capacity for the I-805/Palm Avenue Interchange in different ways but would also share many common proposed Project features. Alternative 1 + IV is shown in **Figure 1.4.1**, and Alternative 2 + IV is shown in **Figure 1.4.2**. In this environmental document, the Build Alternatives and the No Build Alternative are evaluated in terms of improvements to traffic flow and reductions in queuing as well as specific environmental impacts, such as level of direct impact to Palm Ridge Neighborhood Park.

The proposed Project contains a number of standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impacts resulting from the proposed Project. These measures are addressed in more detail in the *Environmental Consequences* sections found in Chapter 2.

#### Common Design Features of the Build Alternatives

Both Build Alternatives would involve many common features as summarized below.

##### Bridge Improvements

To reduce the seismic forces on the structure, the existing bridge would be modified. This would be accomplished by strengthening the existing bridge columns. In addition, the existing joint that runs the full length of the bridge would be removed and replaced with concrete.

##### Infill Wall

The existing structure requires retrofitting along the Palm Avenue Bridge due to structural deficiencies that have developed over time. Both Build Alternatives would provide an infill wall beneath the bridge as a feature which would improve structural integrity of the Bridge.

##### Road Improvements

The approaches immediately off of the bridge structure on both east and west ends would be removed and replaced. WB Palm Avenue would be widened at the I-805 North on-ramp to provide an additional through lane.



### Signal Retiming

The traffic signals at the intersection of Palm Avenue and Firethorn Street would be retimed to coordinate with signals on all of the I-805 ramps.

### Bus Pad

At the request of Metropolitan Transit System (MTS), a bus stop concrete pad on the I-805 on-ramps would be included to accommodate the proposed bus route #688. Features would include the concrete pad and buried conduit for lighting. Bus stop concrete pads would be located on the northbound (NB) and southbound (SB) on-ramps for both Alternatives (near the Palm Avenue Intersection) and would be consistent with City of San Diego Standard Drawing SDG-102.

### Ramp Metering

The existing I-805 on-ramps do not currently have ramp meters. Ramp meters would be installed on all on-ramps to manage ramp traffic flow onto the freeway.

### Ramp Changes

All ramps would be widened, and several would be realigned, as follows:

- The I-805 North and South on-ramps would be widened to accommodate two single-occupancy vehicle (SOV) lanes plus one HOV lane, a left shoulder and right shoulder. HOV lane enforcement areas, as well as Maintenance Vehicle areas requested by Caltrans, would be created.
- The I-805 North off-ramp intersection would be widened to accommodate a shared lane for left and through movements, and two right-turn lanes. The entire ramp would be widened to accommodate two exit lanes from the freeway to the intersection with Palm Avenue.
- The I-805 South off-ramp intersection would be widened to accommodate two right-turn lanes, a shared lane for left and through movements, and a dedicated left-turn lane. The entire ramp would be widened to accommodate two exit lanes from the freeway to the intersection with Palm Avenue.
- The I-805 South on-ramp and I-805 South off-ramp would both be realigned eastward.

### Pedestrian and Bicycle Facilities

Pedestrian access would be maintained with sidewalks on both sides of Palm Avenue and pedestrian crossing facilities at intersections. During construction, pedestrians would be diverted to one side of the bridge such that pedestrian access will be maintained throughout construction.

A Class IV Separated Bikeway is proposed along the eastbound and westbound sides of Palm Avenue. The Class IV Separated Bikeway would taper to match the existing roadway and bicycle facilities at each end of the proposed Project. There would be a signal such that bicyclists can safely continue east past the loop ramp entrance. The curb of the Class IV Separated Bikeway would stop across the entrance and the route would be striped.

Both northbound and southbound access for bicyclists on I-805 shoulders between Palm Avenue and Main Street would be available during construction. Bike access will be maintained along Palm Avenue during construction as best as possible. Staging plans for bike access during construction will be prepared during the Plan Specification and Engineering (PS&E) phase for this project.

### Landscaping

Both Build Alternatives would require re-landscaping of areas affected by the bridge widening and proposed ramp improvements. The proposed Project features include planting, irrigation, and plant establishment work for all landscaped areas within the proposed Project limits. The landscaping would utilize trees, shrubs, vines, ground covers, and erosion control.

### Retaining Walls

Each Build Alternative would have different retaining walls, but two walls would be the same for both Build Alternatives, as follows:

- East of the bridge, a low retaining wall (RW1E in the case of Alternative 1 + IV and RW2D in the case of Alternative 2 + IV) would be constructed along WB Palm Avenue at the Arco gas station near the Kaiser Permanente medical facility; and
- West of the bridge, a low retaining wall (RW1D in the case of Alternative 1 + IV and RW2B in the case of Alternative 2 + IV) would be constructed along WB Palm Avenue within Palm Ridge Shopping Center.

### Utility Relocations

Utilities located within the proposed Project limits include AT&T, Cox Communications, San Diego Gas & Electric (SDG&E), California American Water Company, and City of San Diego. Both Build Alternatives would require utility relocations.

### Property Acquisition

Both Build Alternatives would impact several properties within the project boundaries. The Arco gas station and minimart would be impacted by a partial acquisition of 0.056 acres. Palm Ridge Shopping Center would be impacted by a partial acquisition of 0.027 acres. This information can be found in **Table 2.1.8**.

### Drainage Improvements

The Build Alternatives would require minor modifications to the existing drainage system, which consists of inlets, storm drains, box culverts, slope down drains, ditches, and natural channels. Most of the existing storm drains would continue to be used in the Build Alternatives. Some existing storm drains would be moved, and some additional inlets may be needed due to proposed changes in road alignment. All proposed Best Management Practices (BMPs) will be constructed within the State Right-of-Way. The proposed Project would minimize storm water impacts by implementing proper Construction Site, Design Pollution Prevention and Treatment BMPs.

### Staging Areas

Construction staging would likely be within gore areas of the I-805/Palm Avenue Interchange, and it is assumed that areas within Caltrans Right-of-Way could be temporarily impacted during construction. The gore area of an interchange is the area created between the highway mainline and a ramp that merges into or diverges from the mainline.



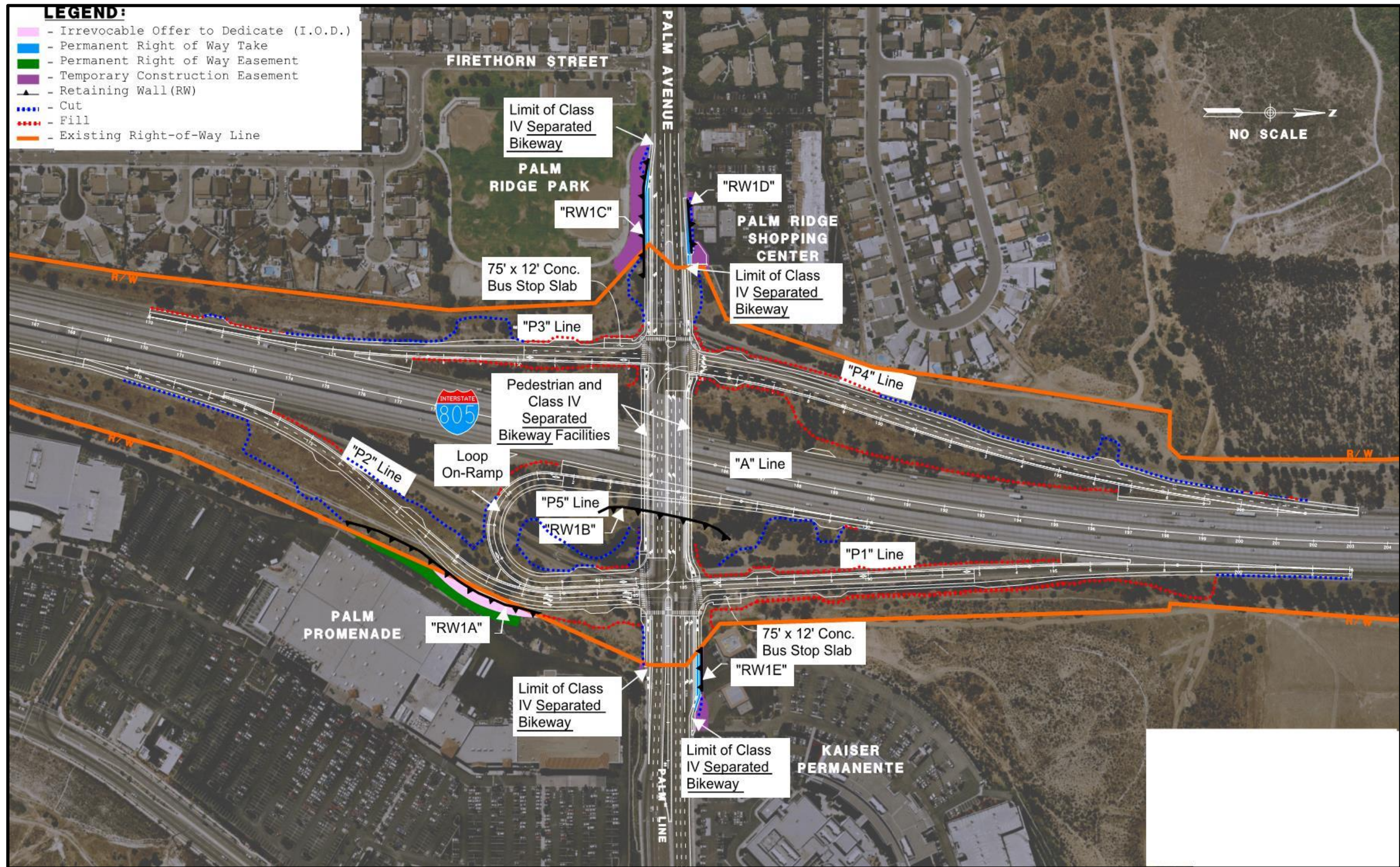


Figure 1.4.1  
Alternative 1 + IV Project Features



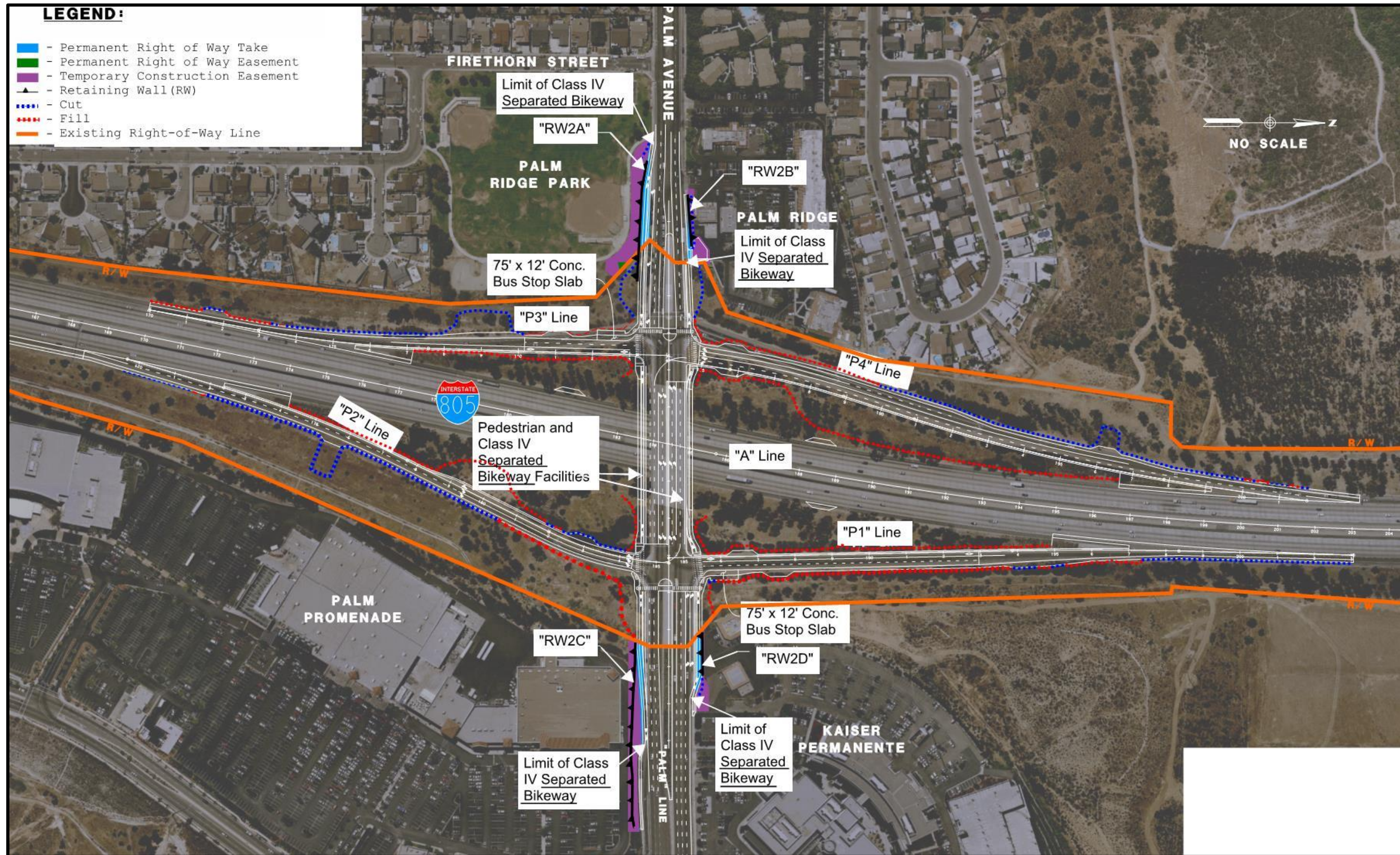


Figure 1.4.2  
Alternative 2 + IV Project Features



## Construction Process

The general process of construction for both Build Alternatives would involve the following work:

1. Complete utility relocations in advance, where possible.
2. Widen bridge and construct retaining walls.
3. Widen and realign ramps and widen Palm Avenue.
4. Complete other finish work such as signage, signal modifications, and roadway striping.
5. Install landscaping.

Night work would be limited to certain proposed construction activities on the bridge, including removal of the old bridge ends, installation of new temporary framework, and pouring concrete on the new bridge.

## **Unique Features of Build Alternative 1 + IV: One Quad Partial Cloverleaf with Class IV Separated Bikeway**

Alternative 1 + IV would address proposed Project purpose and need by widening the Palm Avenue bridge to provide additional lanes, adding a new loop on-ramp for EB traffic on Palm Avenue to access I-805 North, and widening various ramps and roadway approaches to provide additional turn lanes. This alternative was included to eliminate the EB left turn to I-805 North on the bridge.

In addition to the common design features of both Build Alternatives listed previously, Alternative 1 + IV would reduce congestion by constructing the proposed unique Project features summarized below.

### Bridge Widening

The Palm Avenue bridge structure would be widened to the north and south to accommodate additional vehicular travel lanes, a center median, and other features outside the vehicular travel way. The widening to the south would involve a new concrete column with a concrete box girder, as shown in the typical section in **Figure 1.4.3**. The widening to the north would involve a new column on a concrete pile. The number of lanes in each direction would be as follows:

- For WB Palm Avenue, the widened bridge would have two through lanes, plus two left-turn lanes to I-805 South, a Class IV Separated Bikeway, and pedestrian walkways; and
- For EB Palm Avenue, the widened bridge would have three through lanes, plus a right-turn lane for a new loop on-ramp to I-805 North (discussed below), a Class IV Separated Bikeway, and pedestrian walkways.

### Loop On-Ramp

A new loop on-ramp in a one quad partial cloverleaf configuration would be added for EB traffic to turn onto I-805 North via a single right-turn lane at the east end of the bridge. The loop on-ramp would include an SOV lane, an HOV lane, shoulders, and a stationing area for HOV lane enforcement. The ramp would curve under I-805 with approximately 40 feet of vertical clearance. This feature would eliminate the EB left-turn lanes currently on the bridge to the I-805 North on-ramp. Traffic on the new loop on-ramp would enter I-805 North closer to the bridge than the existing merge point. The loop on-ramp would require the existing I-805 North off-ramp to be realigned eastward into the slope below Palm Promenade Shopping Center. The I-805 North on-ramp intersection at Palm Avenue would move slightly eastward to line up with the realigned off-ramp at the intersection.

### Road Widening West of the Bridge

Between the bridge and Firethorn Street, two through lanes would accommodate WB traffic; two through lanes plus a longer right-turn lane to the I-805 South on-ramp would accommodate EB traffic.

### Road Widening East of the Bridge

Between the bridge and the proposed Project end near Denney Road, two right-turn lanes to the I-805 North on-ramp and three through lanes would be constructed for WB traffic; three through lanes would be constructed for EB traffic.

A roadway typical section for Palm Avenue is shown in **Figure 1.4.4**.

### Retaining Walls

Three retaining walls would be unique to Alternative 1 + IV, as follows:

- West of the bridge, a retaining wall (RW2A) with a proposed maximum height of approximately 10 feet would be constructed along the EB side of Palm Avenue within Palm Ridge Neighborhood Park and Caltrans Right-of-Way;
- The loop on-ramp would require a retaining wall (RW1B) within Caltrans Right-of-Way east of the freeway main lanes; and
- The realignment of the I-805 North off-ramp to accommodate the new loop on-ramp would require a retaining wall (RW1A) along the off-ramp in the slope below Palm Promenade Shopping Center.

### Utility Relocation

Alternative 1 + IV would affect 6 utilities: gas pipelines (SDG&E), telecommunication lines (AT&T), fiber optic lines (Cox Communication), water pipelines (California American Water), and water and sewer pipelines and storm drain facilities (City of San Diego).

### Hazardous Waste

Alternative 1 + IV would have a potential hazardous waste issue due to the presence of the former South Bay Burn Site in the slope below Palm Promenade Shopping Center where this alternative would construct a retaining wall.

### Property Acquisition

Alternative 1 + IV would impact several properties within the project boundaries. Palm Ridge Neighborhood Park would be impacted by a permanent easement that would require 0.09 acres of property acquisition. Palm Promenade Shopping Center would be impacted by a partial acquisition and permanent easement on the slope adjacent to the I-805 North off-ramp that would require 0.286 acres of property acquisition. This information can be found in **Table 2.1.8**.

### **Unique Features of Alternative 2 + IV: Spread Diamond with Class IV Separated Bikeway**

Alternative 2 + IV would address the proposed Project purpose and need by widening the Palm Avenue bridge to provide additional lanes and longer turn pockets and widening various ramps and roadway approaches to provide additional turn lanes.

In addition to the common design features of both Build Alternatives listed previously, Alternative 2 + IV would reduce congestion by constructing the proposed unique Project features summarized below.

### Bridge Widening

The Palm Avenue bridge structure would be widened to the north and south to accommodate additional vehicular travel lanes, a center median, and other features outside the vehicular travel way. The widening to the south would involve a new concrete column and concrete box girder, and the widening to the north would involve a new column on a concrete pile, similar to Alternative 1 + IV. The main difference between the design of Alternative 1 + IV and Alternative 2 + IV is the width of the bridge deck that is being provided. Alternative 2 + IV will have a wider bridge deck than Alternative 1 + IV. The

typical section for Alternative 2 + IV bridge widening is shown in **Figure 1.4.5**. The number of lanes in each direction would be as follows:

- For WB Palm Avenue, the widened bridge would have two through lanes plus two left-turn lanes to I-805 South, a Class IV Separated Bikeway, and pedestrian walkways; and
- For EB Palm Avenue, the widened bridge would have three through lanes plus two left-turn lanes to I-805 North, a Class IV Separated Bikeway, and pedestrian walkways.

#### Road Widening West of the Bridge

Between the bridge and Firethorn Street, two through lanes would accommodate WB traffic; three through lanes plus a longer right-turn lane to the I-805 South on-ramp would accommodate EB traffic.

#### Road Widening East of the Bridge

Between the bridge and the proposed Project end near Dennerly Road, two right-turn lanes to I-805 North on-ramp and three through lanes for WB traffic would be constructed; three through lanes would be constructed for EB traffic.

A roadway typical section for Alternative 2 + IV is shown in **Figure 1.4.6**.

#### Retaining Walls

Two retaining walls would be unique to Alternative 2 + IV, as follows:

- West of the bridge, a retaining wall (RW2A) with a proposed maximum height of approximately 17 feet would be constructed along EB Palm Avenue within Palm Ridge Neighborhood Park and Caltrans Right-of-Way.
- East of the bridge, a ground anchor retaining wall (RW2C) would be constructed in place of the existing crib wall along the EB side of Palm Avenue within Palm Promenade Shopping Center.

#### Utility Relocation

In addition to the utilities affected by Alternative 1 + IV, Alternative 2 + IV would result in relocation of a 69 kV SDG&E overhead electrical pole in EB Palm Avenue, North of Palm Promenade Shopping Center.

#### Property Acquisition

Alternative 2 + IV would impact several properties within the project boundaries. Palm Ridge Neighborhood Park would be impacted by a permanent easement that would require 0.22 acres of property acquisition. Palm Promenade Shopping Center would be impacted by a permanent easement on the slope parallel to Palm Avenue that would require 0.078 acres of partial acquisition and property acquisition. This information can be found in **Table 2.1.8**.

### **Transportation Demand Management, Transportation System Management, and Mass Transit Alternatives**

Transportation Demand Management (TDM), Transportation System Management (TSM), and Mass Transit strategies are required for consideration on proposed major highway projects in urban areas over 200,000 population.

Although Transportation System Management measures alone could not satisfy the purpose and need of the proposed Project, the following Transportation System Management measures have been incorporated into the Build Alternatives for this proposed Project:

- Addition of HOV lanes to ramps;

- Installation of ramp metering;
- Retiming/coordination of traffic signals;
- Construction of bus stop concrete pads along the I-805 on-ramps to accommodate proposed future bus route improvements; and
- Installation of Class IV Separated Bikeway facilities and wider than standard sidewalks within the proposed Project footprint for bicyclists and pedestrians.

### **No Build Alternative**

The No Build Alternative represents the condition of not implementing a proposed Project. The No Build Alternative proposes no physical changes from existing conditions.

In the No Build Alternative, none of the impacts associated with constructing proposed Project features would occur. For example, no excavation that could affect paleontological resources would occur, and no changes would be made to Palm Ridge Neighborhood Park as a result of widening Palm Avenue. However, the No Build Alternative would not improve arterial or interchange capacity and would not improve access for bicyclists and pedestrians. The No Build Alternative would not meet the purpose and need of the proposed Project because it would not reduce congestion, prevent conflicts between turn and through movements, or increase on-ramp storage. In the No Build Alternative, as traffic would continue to increase, longer delays and further degradation in LOS would occur, as follows:

- The existing condition of the I-805/Palm Avenue Interchange operating at above capacity would worsen;
- The intersection of Palm Avenue and the I-805 North on- and off-ramps would operate at an unacceptable LOS E;
- At the I-805/Palm Avenue Interchange ramps, traffic queues would spill beyond the turn pocket lengths, resulting in through traffic being blocked and ramp storage limits being exceeded at certain locations;
- Weaving sections for I-805 North and South freeway traffic between the SR-905 and Main Street Interchanges would exceed acceptable LOS during both morning and afternoon peaks;
- Ramp metering for the I-805 North on-ramp would result in queues that would extend far beyond the ramp storage limits with average delays estimated to be over 40 minutes;
- Seismic instability at the Palm Avenue Bridge would not be addressed; and
- The bridge approaches would continue to require maintenance, and the existing longitudinal joint in the first two spans would continue to be vertically offset by up to 1.5 inches.

Indirectly, the increased traffic congestion in the proposed Project area may inhibit access to shopping opportunities, medical facilities, Palm Ridge Neighborhood Park, and adjacent residential neighborhoods, which could have a negative impact on the economic health of the surrounding community.



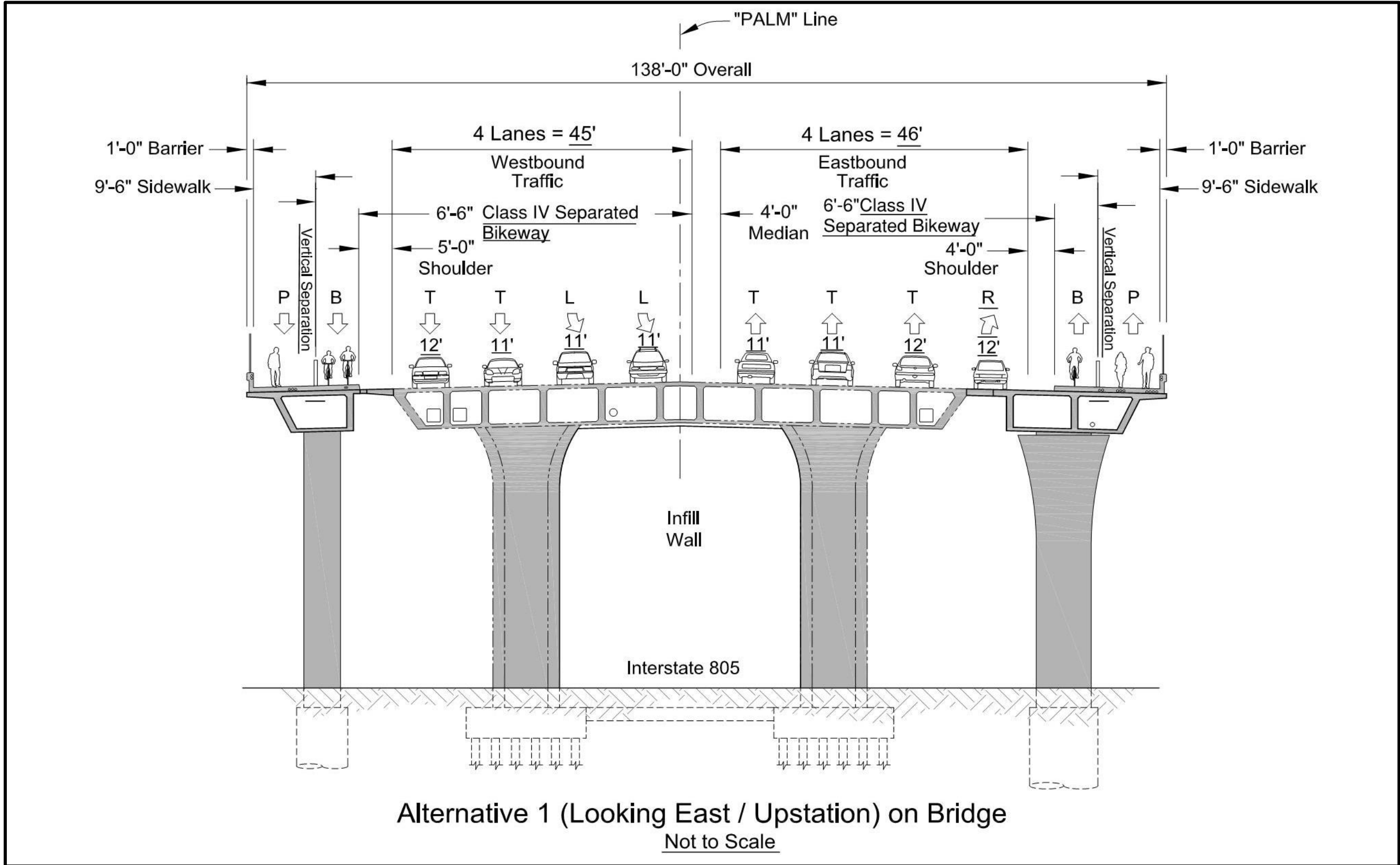


Figure 1.4.3  
Alternative 1 + IV Palm Avenue Bridge Typical Cross-Section

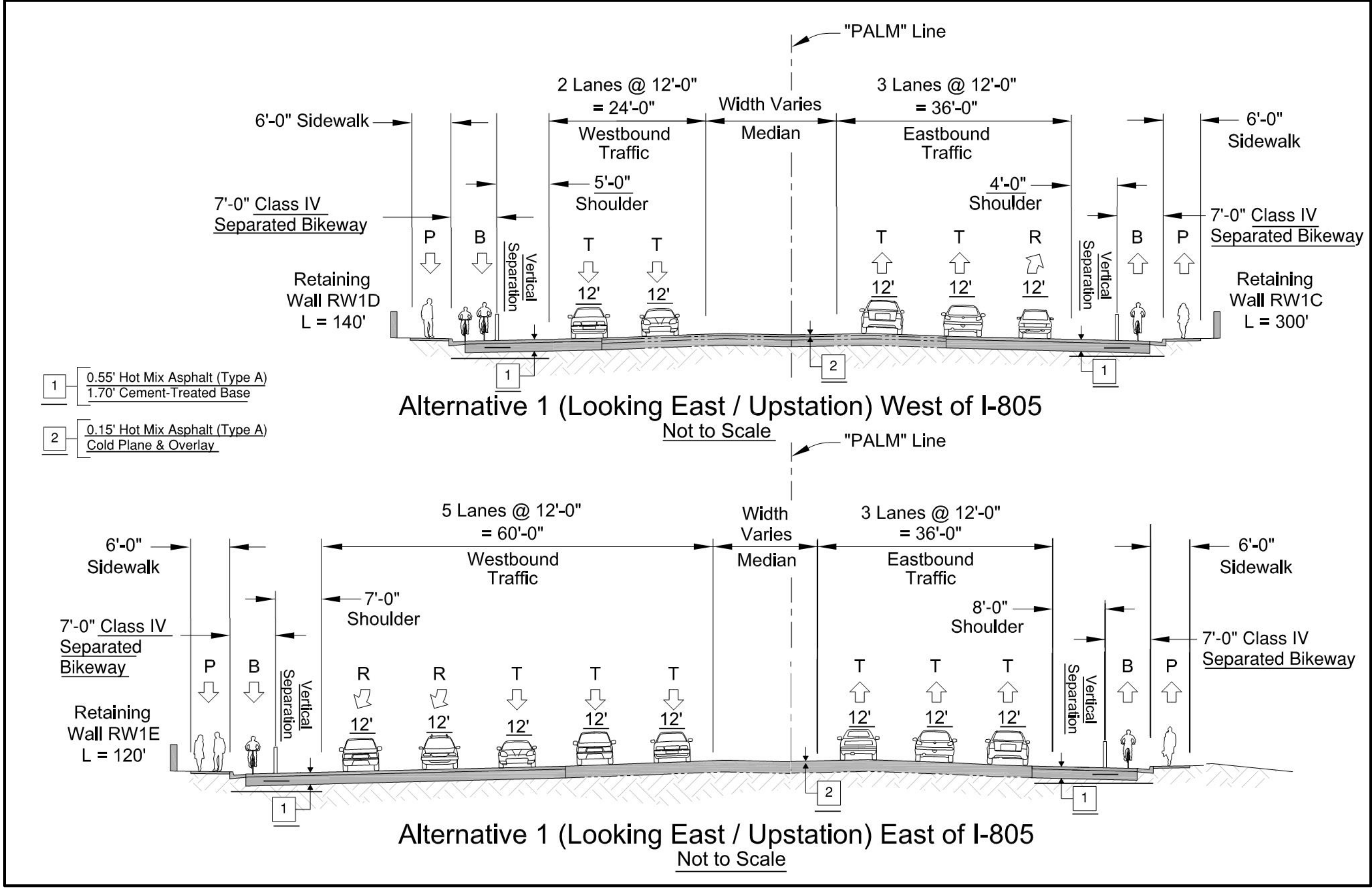


Figure 1.4.4

Alternative 1 + IV Palm Avenue Roadway Typical Section

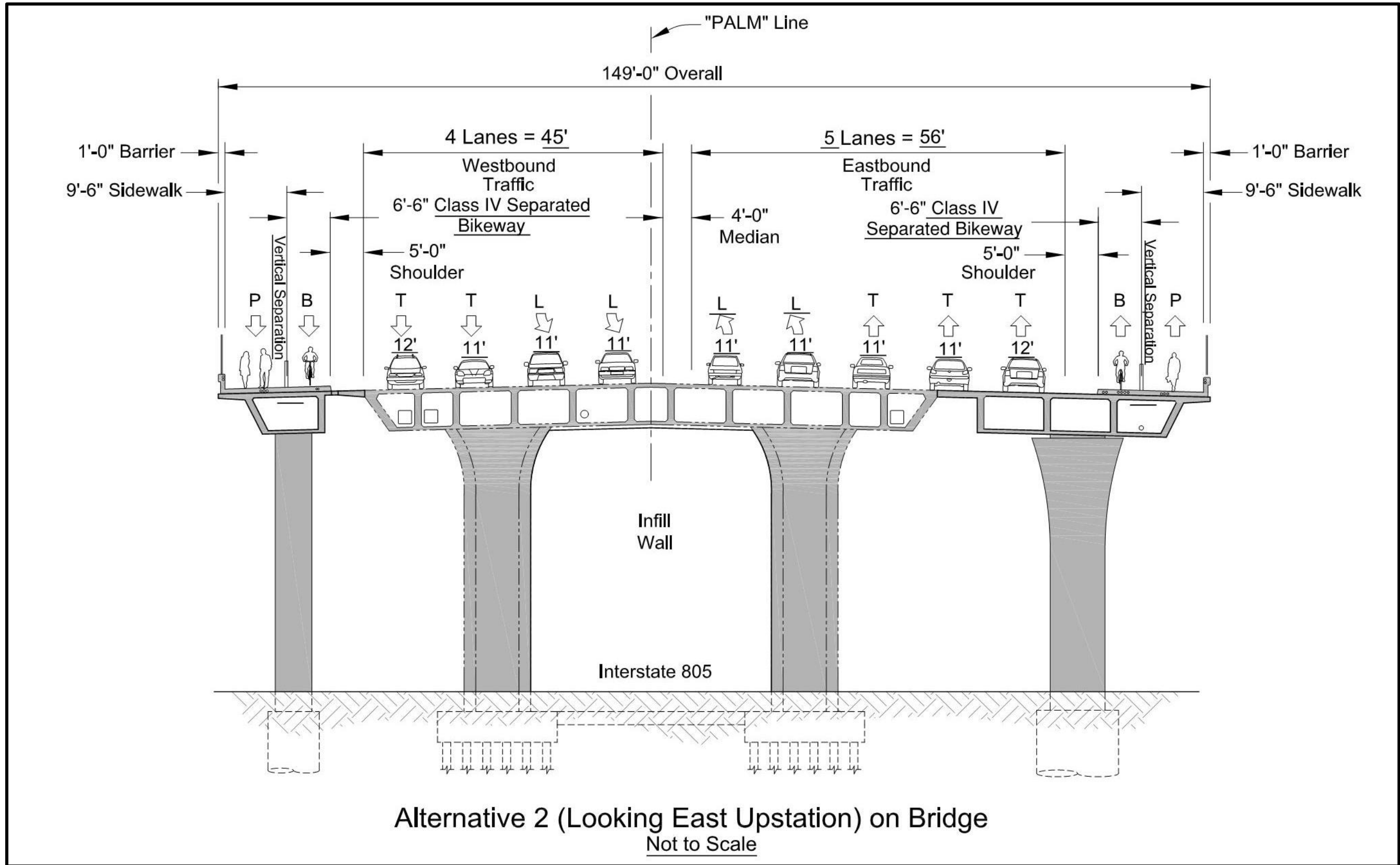


Figure 1.4.5

Alternative 2 + IV Palm Avenue Bridge Typical Cross-Section

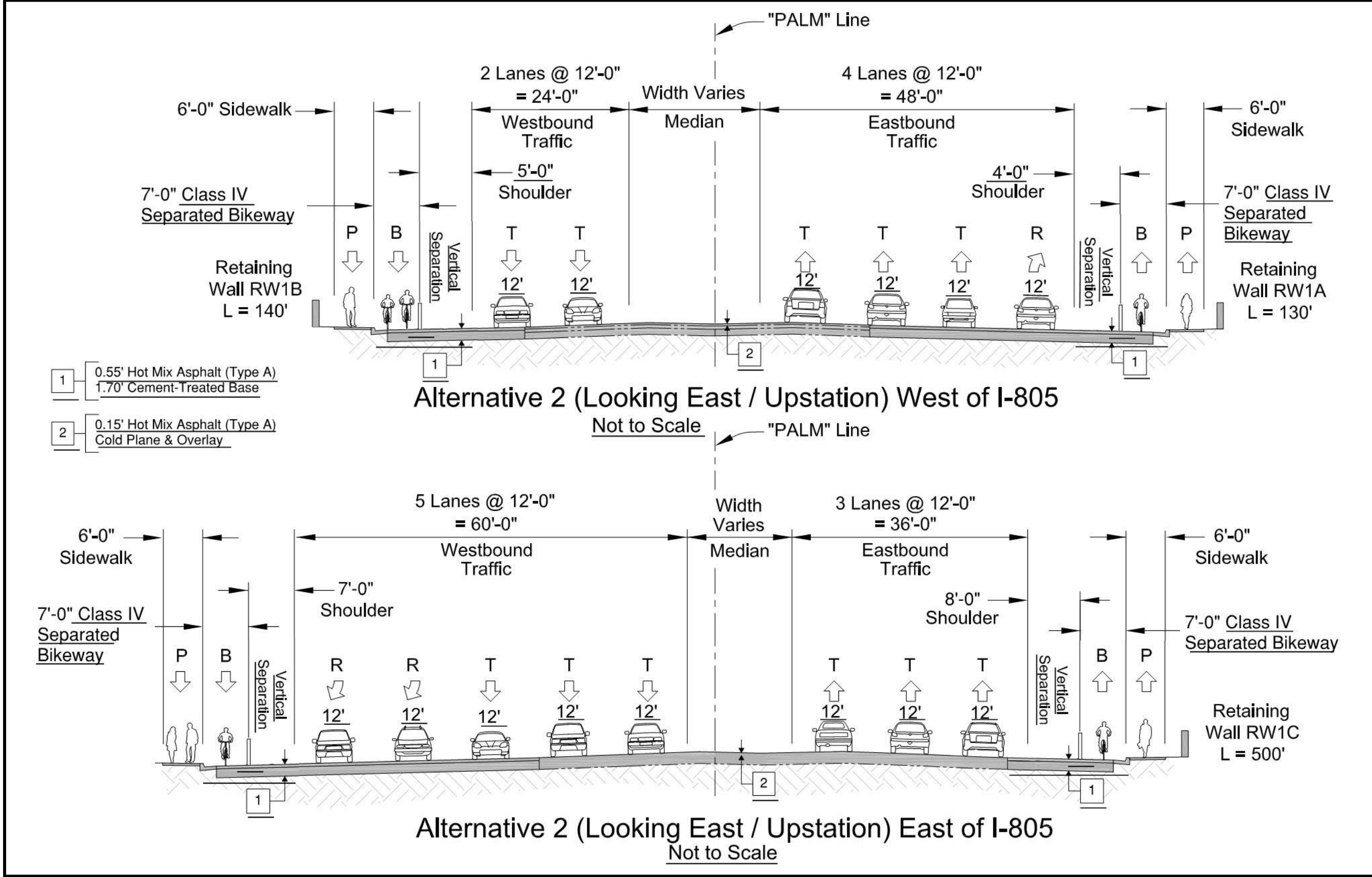


Figure 1.4.6

Alternative 2 + IV Palm Avenue Roadway Typical Section

## 1.4.2 Comparison of Alternatives

**Table 1.4.1** compares the No Build Alternative and the two Build Alternatives in terms of proposed traffic improvements and impacts to other important resources. The comparison indicates that Alternative 1 + IV would provide slightly more benefits to traffic operations than Alternative 2 + IV, and both Build Alternatives would improve operations well above the No Build Alternative. In terms of impacts to the human, physical, and biological environment discussed in Chapter 2, the Build Alternatives would have similar impacts except for the following issues:

- Alternative 2 + IV would cause greater Parks and Recreation impacts because it would require a higher and longer retaining wall and would remove more slope along Palm Ridge Neighborhood Park than Alternative 1 + IV.
- Alternative 2 + IV would result in relocation of a 69 kV SDG&E overhead electrical pole.
- Alternative 1 + IV would have greater potential hazardous waste issues due to the presence of the former South Bay Burn Site in the slope below Palm Promenade Shopping Center where this alternative would construct a retaining wall.

After the public circulation period, all comments were considered, and the Project Development Team (PDT) selected the preferred alternative and made the final determination of the proposed Project's impacts on the environment. Under CEQA, it was concluded that significant adverse impacts exist, but could be mitigated to below a level of significance. Thus, a Mitigated Negative Declaration (MND) was prepared. Similarly, it was determined that the proposed Project as a whole does not significantly impact the environment. Thus, Caltrans, as assigned by FHWA, issued a Finding of No Significant Impact (FONSI) in accordance with NEPA.

**Table 1.4.1 Alternatives Comparison**

Potential Impact	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
Consistency with the City of San Diego General Plan	Consistent		Traffic would continue to increase, which is not consistent with the City of San Diego General Plan or San Diego County General Plan
Consistency with the San Diego County General Plan			
Parks and Recreation	Effects to Palm Ridge Neighborhood Park, including conversion of 0.09-acre, removal of approximately 13 trees.	Effects to Palm Ridge Neighborhood Park, including conversion of 0.22-acre, removal of approximately 13 trees, relocation of 25-foot-long segment of water pipeline.	No improvements are proposed; no impacts to parks are anticipated
Growth and Community Character and Cohesion	No Impacts to Growth or Community Character and Cohesion		
Environmental Justice	No disproportionate effect		No improvements proposed; environmental justice communities would be impacted by increased congestion and longer delay times

**Table Continued on Next Page**

(Continued) Table 1.4.1 Alternatives Comparison

Potential Impact	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
Emergency Services	Hospitals with emergency services and fire stations that may require access through work zones during construction would be accommodated		No improvements proposed; emergency services would be impacted by longer delays cause by increased congestion
Utilities	Multiple City storm drain facilities and water pipelines, a City sewer pipeline, and several segments of a water pipeline owned by California American Water may be relocated or reconfigured; fewer utilities would be impacted when compared to Alternative 2 +IV	Multiple City storm drain facilities and water pipelines, a City sewer pipeline, several segments of a water pipeline may be relocated or reconfigured, and a 69 kV SDG&E power pole would need to be moved; when compared to Alternative 1 + IV, Alternative 2 + IV has a greater impact to utilities as the proposed construction would occur along the current configuration	No improvements proposed; no impacts to utilities are anticipated
Pedestrian and Bicycle Facilities	A Class IV <u>Separated Bikeway</u> would be part of the construction along Palm Avenue, creating a safer facility for both bikers and pedestrians on Palm Avenue		No improvements proposed; therefore, no improvements to bike or pedestrian facilities would be provided
Bus Transit	Bus pads would be constructed on the I-805 NB and SB on-ramps in order to accommodate the new Rapid Route #688		No improvements proposed; therefore, no Rapid Route stops would be accessible at the I-805/Palm Avenue Interchange
Construction Impacts to Traffic, Transportation, Bike, and Pedestrian Facilities	Short term closure of ramps, I-805, and lanes of Palm Avenue, affect bus routes 933 and 934, construction staging along edges of parking lots along Palm Avenue; the existing pedestrian and bicycle facilities will be rerouted during construction		No improvements proposed; no construction impacts to traffic, and transportation/ pedestrian and bicycle facilities anticipated
Utility Displacements	6 utilities would be impacted	6 utilities as well as an SDG&E 69 kV power pole would be impacted	No improvements proposed; no displacements anticipated
Hazardous Waste	Site of a former trash dump lies within an area that would be excavated	No hazardous waste impacts anticipated because the dump site would not be excavated	No improvements are proposed; therefore, no hazardous waste impacts anticipated

Table Continued on Next Page

(Continued) Table 1.4.1 Alternatives Comparison

Potential Impact		Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
Traffic Conditions	Intersection Delay	Improvement to LOS C in the PM peaks at Palm Ave & I-805 SB, LOS B at Palm Ave & I-805 NB in the AM peak and LOS A in the PM peak in 2020. In 2040, improvements to LOS C in the AM peak and LOS B in the PM peak at Palm Ave & I-805 NB	Improvement to LOS C in the AM and PM peaks at I-805 North ramps and LOS E at the Palm Ridge Shopping Center Driveway in 2040	Combined I-805 ramps intersection above capacity in the PM peak in 2020 and in both AM and PM peak in 2040
	Intersection Queuing	Elimination of all queues except for the EB through movement at I-805 South in 2040 PM peak	Elimination of all queues in 2020 and 2040	Queues at signalized intersections under existing conditions would worsen in 2020 and 2040
	Roadway Segmentation Capacity	Unquantified Increase in overall road capacity; operation anticipated at LOS E or LOS F		Palm Avenue from Kostner Drive to Firethorn Street and Firethorn Street to the I-805 SB ramps would worsen to LOS E or LOS F in 2020 and 2040 due to increases in traffic volume
	Freeway Segment Capacity	Each freeway segment would operate at LOS E or better in 2020 and 2040		
	Freeway Ramp Merge/ Diverge/ Weave Operations	By 2040, all freeway ramp merge/ diverge/ weave volumes would exceed LOS D with the exception of the NB I-805 on-ramp during the AM peak period. Thus, it is expected that ramp congestion would be better under Alternative 1 + IV	By 2040, all peak-hour freeway ramp merge/ diverge/ weave volumes would exceed LOS D under Alternative 2 + IV	By 2040, all peak-hour freeway ramp merge/ diverge/ weave volumes would exceed LOS D under the No Build Alternative.
	Ramp Meter Operations	Delays at maximum of 4 minutes at I-805 South ramp, with no queues beyond the ramp storage length in 2020 and 2040; decrease in delay and queuing in both North and South ramp when compared to No Build Alternative	Delays at a maximum of 4 minutes at I-805 South ramp, with no queues beyond the ramp storage length in 2020 and 2040; average delay at I-805 North ramp to be 6 minutes and queues would average 0.5 mile in 2020 and 2040	By ramp meter placement in 2020, delays at a maximum of 4 minutes at the I-805 South ramp, but would greatly exceed 40 minutes at the I-805 North ramp

### **1.4.3 Identification of a Preferred Alternative**

Alternative 2 + IV, the Spread Diamond with Class IV Separated Bikeway, was identified as the preferred alternative by the Project Development Team on April 10, 2019. Neither of the Build Alternatives considered would result in adverse impact to the environment; thus, the following criteria summarizes the reasons for identifying Alternative 2 + IV over Alternative 1 + IV:

- The Project purpose and need are met to a greater extent by the preferred alternative. Alternative 2 + IV reduces congestion during peak periods and reduces delay on Palm Avenue at the Interchange to a greater extent than does Alternative 1 + IV;
- Improvements to local traffic conditions are greater for the preferred alternative. The preferred alternative design will widen the Palm Avenue bridge to provide additional lanes and longer turn pockets and will widen various ramps and roadway approaches to provide additional turn lanes. These changes will increase ramp storage as well as signal storage lengths. With these changes, existing delay on Palm Avenue west of I-805 will be reduced, queuing deficiencies will be reduced, intersecting lane vehicles (ILV) deficiencies will be resolved, and future congestion at the I-805 ramps will be reduced; and
- The preferred alternative is more cost effective than Alternative 1 + IV.

### **1.4.4 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Initial Study/Environmental Assessment (IS/EA)**

Many alternatives were developed and evaluated previously in the 1994 study documents and evaluated again and updated in the 2013 Project Study Report. The main alternatives considered but rejected are summarized below. Conceptual layout drawings of the alternatives removed from consideration are included in Attachment #13 of the 2013 Project Study Report.

#### Alternatives 1 and 2 without Class IV Separated Bikeway

Alternative 1 (One-Quad Partial Cloverleaf) and Alternative 2 (Compressed Diamond) are similar to the Build Alternatives but would not include a Class IV Separated Bikeway bicycle facility within the proposed Project footprint or features to accommodate the Separated Bikeway. These alternatives were removed from consideration because they would not provide the enhanced bicycle facility, which is considered to be an essential TSM strategy.

#### Alternatives 3 and 4: Par-Clo A-B and B

These alternatives would involve installing a partial cloverleaf entrance ramp similar to Build Alternative 1 + IV. They were removed from consideration because they would not provide any additional improvement over the Build Alternatives but would require extensive additional structures that would cause substantial visual impact.

#### Alternative 5: Single Point Interchange

This alternative would condense the two ramp intersections into one. It was removed from consideration due to the conflicts associated with the required new bridge ramps and the existing lanes of I-805, community impacts, constructability, and non-motorized mobility.



### Alternative 6: Roundabout Interchange

This alternative would replace the intersections at each of the ramps with roundabouts. It was removed from consideration because of the potential for poor operational performance during the AM and PM peaks when the ramp meters would be in use and would impact pedestrian safety.

### Alternative 7: Three Level Interchange

This alternative would relocate the I-805/Palm Avenue Interchange to be under the existing bridge structure. It was removed from consideration due to pedestrian impacts, environmental and visual impacts, access to adjacent driveways/intersections, constructability, and because it would preclude future widening on I-805 North.

### Alternative 8: Diverging Diamond Interchange

This alternative would replace the existing I-805/Palm Avenue Interchange with a Diverging Diamond Interchange, which would eliminate left-turn movements. It was removed from consideration because it would preclude through bus movement for possible future bus rapid transit and would have the potential to block the adjacent off-ramp due to queuing at the ramp meters.

### Raised Median

This alternative would add a raised median on Palm Avenue between Firethorn Street and the existing raised median west of the bridge. It was removed from consideration because it would restrict the left turn out of the Palm Ridge Shopping Center and would not achieve sufficient traffic improvement benefits as part of the proposed Project.

## **1.5 Permits and Approvals Needed**

The following permits, reviews, and approvals would be required for the proposed Project:

**Table 1.5.1 List of Permits and Approvals Needed**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
City of San Diego Department of Park and Recreation	Concurrence with 4(f) <i>de minimis</i> impact finding for Palm Ridge Neighborhood Park	Approved with signatures from the City of San Diego and Caltrans. Attached in <b>Appendix A</b> .
<u>Federal Highway Administration</u>	Air Quality Conformity Determination	<u>The Federal Highway Administration found that the project is consistent with the requirements of the Clean Air Act on May 14, 2019. Attached in <b>Appendix G</b>.</u>
City Council	Park Land Transfer Approval of ROW easement on dedicated Park Land.	To be completed prior to construction.
<u>California State Water Resources Control Board – Stormwater Program</u>	Caltrans NPDES Permits	To be completed prior to construction.
California Public Utilities Commission	Utilities Construction Permit Request	To be completed prior to construction.
Caltrans	Encroachment Permit	To be completed prior to construction.

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

As part of the scoping and environmental analysis carried out for the proposed Project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in the document.

- Coastal Zone
  - There will be no effects to coastal resources because the proposed Project is not located within the coastal zone.
- Wild and Scenic Rivers
  - No wild and scenic rivers exist within the proposed Project Area.
- Farmlands/Timberlands
  - No farmlands or timberlands exist within the proposed Project Area. A brief discussion of nearby farmlands is provided in **Section 2.1.1 Land Use**. More information regarding Farmlands/Timberlands is provided in the Community Impact Assessment (CIA), dated June 30, 2017.
- Cultural Resources
  - Per the July 2017 Historic Properties Survey Report (HPSR), The National Historic Preservation Act (NHPA) Section 106 finding for the proposed Project as a whole is No Historic Properties Affected as the Area of Potential Effects is devoid of cultural resources.
- Wetlands and Other Waters
  - No jurisdictional waters exist within the Project footprint. More information on wetlands and other waters is provided in the “Interstate 805/Palm Avenue Interchange Improvements Project Natural Environment Study, Including Focused Studies for Special-Status Species Interstate 805 and Palm Avenue San Diego County, California” (NES), dated February 28, 2017.

### 2.1 HUMAN ENVIRONMENT

#### 2.1.1 Land Use

##### Existing and Future Land Use

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

##### ***Existing Land Use***

##### Proposed Project Area

The proposed Project is located in San Diego County, within the boundaries of the City of San Diego. **Figure 2.1.1** and **Figure 2.1.2** show existing land use and zoning designations, respectively.

Existing land uses west of the I-805/Palm Avenue Interchange are primarily residential, but also include commercial, recreational, and educational uses. Residential units are primarily single-family homes, but also include apartments. In addition, Palm Ridge Neighborhood Park and a commercial strip mall (Palm Ridge Shopping Center) are located on Palm Avenue immediately west of the I-805/Palm Avenue Interchange.

Existing land uses east of the I-805/Palm Avenue Interchange are a blend of commercial and residential uses. Palm Promenade Shopping Center, which contains restaurants, grocery stores, other stores and an Arco gas station, is located immediately east of the I-805/Palm Avenue Interchange and accessed from EB Palm Avenue. The Kaiser Permanente Otay Mesa Medical Offices are located at the northeast quadrant of the I-805/Palm Avenue Interchange with access

from WB Palm Avenue and Dennerly Road. Single-family homes begin east of the intersection of Dennerly Road and Palm Avenue and are built within low-density and medium-density residential zoning designations. Vacant, undeveloped land located east of Dennerly Road is zoned for agricultural use. However, this land is not currently used for agricultural purposes at this time.

Otay Valley Regional Park is located north of the I-805/Palm Avenue Interchange. The park, which is located west and east of I-805, contains a mix of recreational opportunities including hiking, biking, and horse trails. The portion of the park immediately west of I-805 is zoned for agricultural use and open space, and the portion of the park immediately east of I-805 is zoned for agricultural use. According to the California Department of Conservation California Important Farmland Finder (2016), approximately 18.5 acres of Farmland of Local Importance are located east of I-805 and north of Palm Avenue. In addition, the land immediately east and west of I-805 North of Palm Avenue and land within Otay Valley Regional Park west of I-805 is zoned for agricultural use. However, this land is not currently used for agricultural purposes, as it is undeveloped and contains only shrubbery and non-agricultural trees. More information regarding Farmlands/Timberlands is provided in the Community Impact Assessment (CIA), dated June 30, 2017.

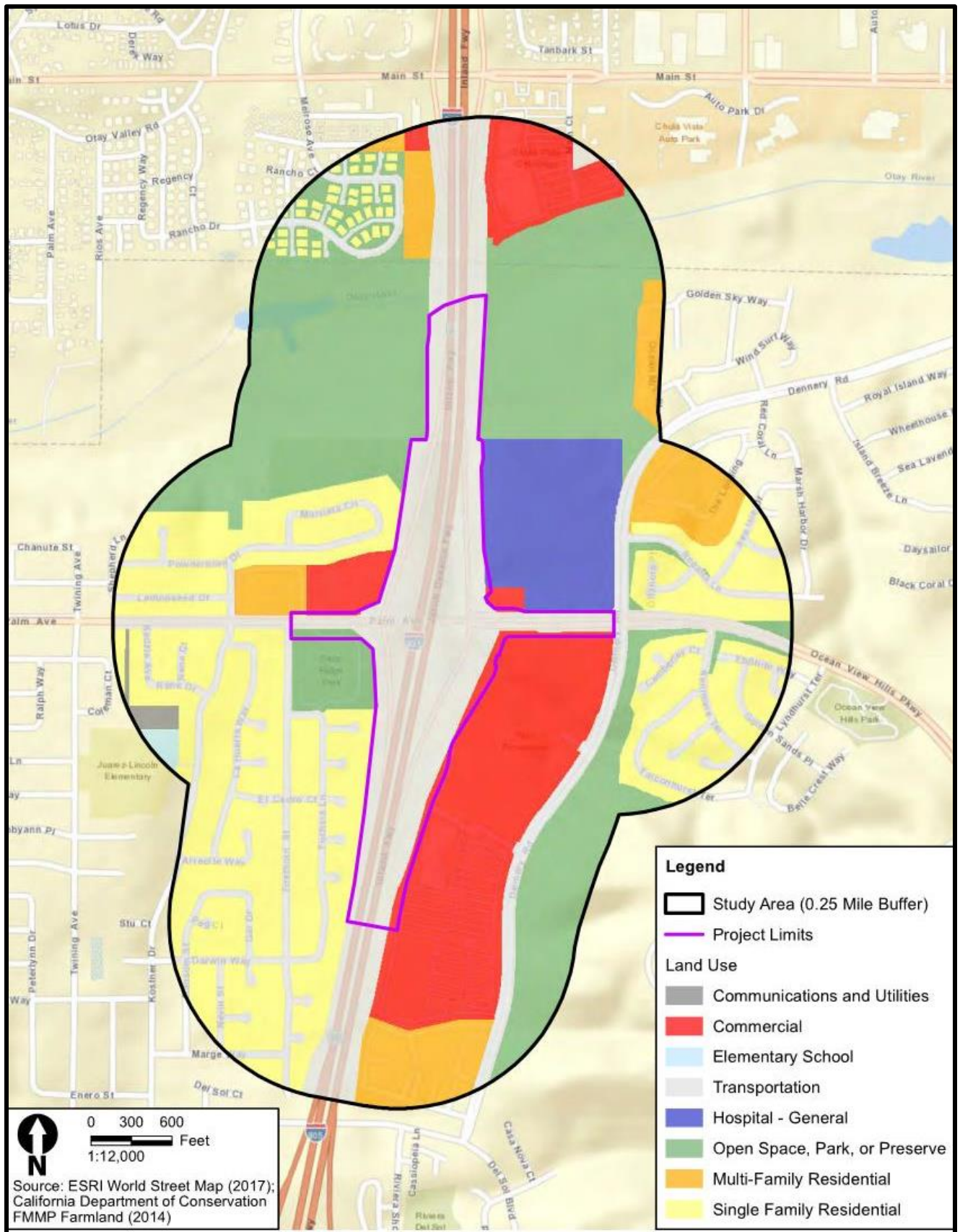
In some cases, existing land uses on parcels of land are different from the zoning designations for the parcels of land. The following are cases in which a discrepancy between a zoning designation and an existing land use occur:

- Land immediately north of the I-805/Palm Avenue Interchange within the Interchange diamond is zoned for agricultural use; although this land is zoned as agriculture use, the current use is transportation and will be used as such in the future conditions;
- Palm Ridge Neighborhood Park is zoned for residential use but is used as a recreational resource; and
- Portions of land located within Otay Valley Regional Park are zoned for agricultural use but are used as a recreational resource.

#### Development Trends and Developable Land

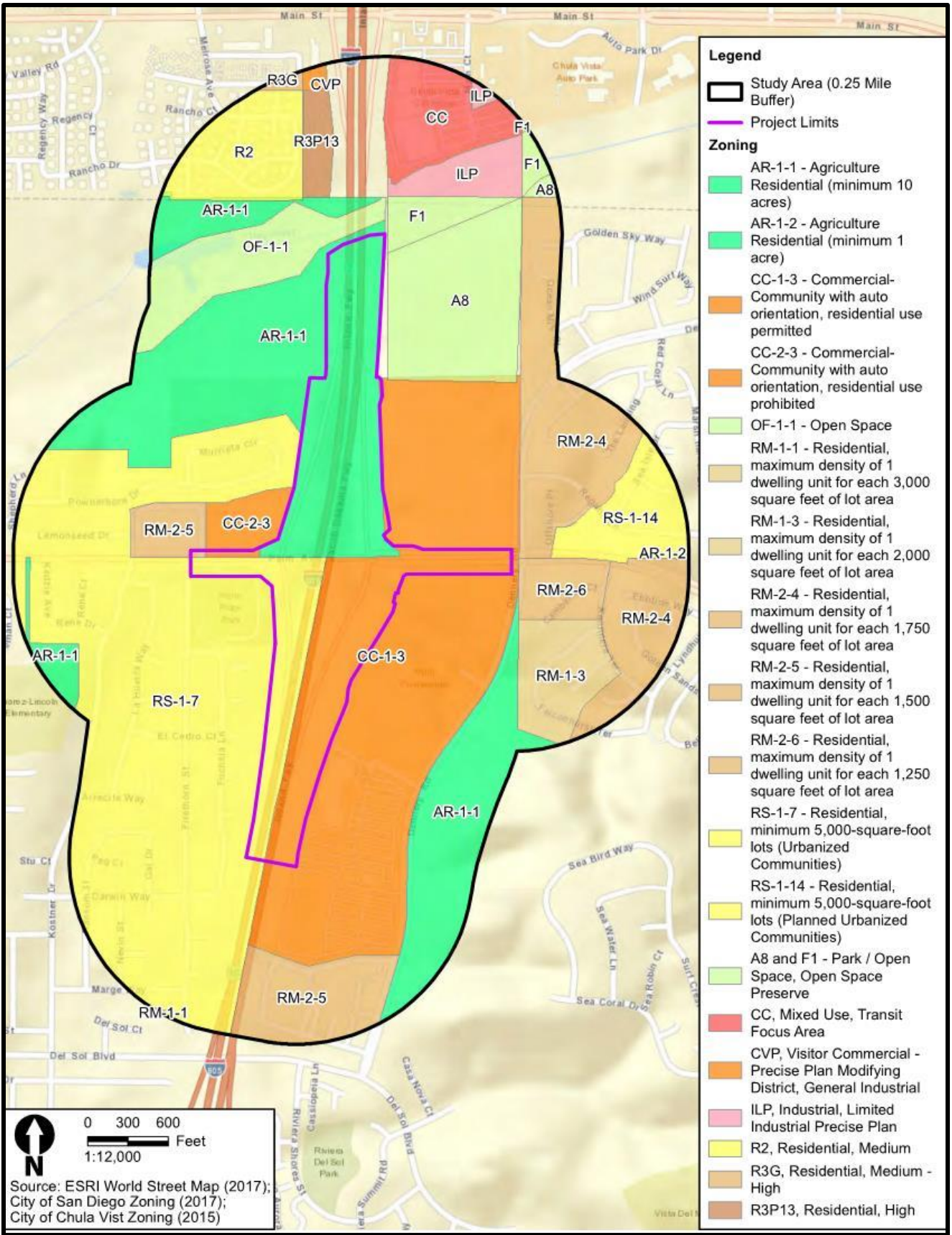
As discussed in Chapter 1, *Transportation Demand Management, Transportation System Management, and Mass Transit Alternatives* of this environmental document, the population of San Diego County has grown since 2010 and is expected to continue growing through 2050. The population of the county is expected to increase by 40 percent between 2008 and 2040. According to the City of San Diego General Plan, the population of the City is expected to grow approximately 29 percent between 2010 and 2030.

I-805 is the dividing line between the Otay Mesa-Nestor Community Planning Area and the Otay Mesa Community Planning Area. The proposed Project area west of the I-805/Palm Avenue Interchange is located within Otay Mesa-Nestor, where 95 percent of the residential land within the community has been developed. In contrast, the area east of the I-805/Palm Avenue Interchange is located within the Otay Mesa Community Planning Area, where the population is forecasted to grow from 15,001 to 51,329, a 242 percent increase, between 2010 and 2030. In addition, the Otay Mesa Community Plan (2014) forecasts that the number of housing units will grow from 4,145 to 13,850, a 234 percent increase, between 2010 and 2030.



**Figure 2.1.1**  
**Existing Land Use**





**Figure 2.1.2**  
**Zoning**

## Future Land Uses

Land uses in the area west of the I-805/Palm Avenue Interchange largely consist of built-out residential and open space/park and are unlikely to change in the future. The area east of the 805/Palm Avenue Interchange is envisioned in the Otay Mesa Community Plan as a Transit-Oriented Activity Center with land uses specified as Regional Commercial between the freeway and Dennerly Road, and low density Residential along Ocean View Hills Parkway with Open Space to the southeast. According to the community plan, precise plans that have been adopted to help implement community plan goals include South Palm and Riviera Del Sol parallel to I-805, and residential focused plans such as Dennerly Ranch and California Terraces (**Figure 2.1.3**). The community plan notes that because the precise planning areas are almost completely developed, these residential neighborhoods are not projected to change significantly for the life of the community plan. Major development within the proposed Project vicinity is infrastructure related, as compiled in **Table 2.1.1**.

## Environmental Consequences

Temporary circulation impacts would be disruptive to residents within and around the proposed Project area who utilize the I-805/Palm Avenue Interchange to access I-805, commute, or access the businesses surrounding the I-805/Palm Avenue Interchange. Proposed construction activities and lane closures would affect access to businesses along Palm Avenue and Dennerly Road as well as access to the Kaiser Permanente Otay Mesa Medical Offices. While the medical offices do offer urgent care services, no emergency services are provided at the facility. All of these construction period effects on access would be temporary and short in duration. Access, though impeded, would be maintained to all land uses at all times via detours or other traffic control measures. Effects on access would be addressed through implementation of the Transportation Management Plan (TMP), as addressed in **Section 2.1.5 (Traffic and Transportation/Pedestrian and Bicycle Facilities)** of this environmental document. These temporary impacts would not influence land uses or development.

**Table 2.1.1 Major Developments within the Proposed Project Vicinity**

Name	Jurisdiction	Proposed Uses	Status
Otay Valley Manhole Improvements	City of San Diego	Replacement or rehabilitation of 69 existing manholes in the Otay Valley area.	Under construction
Pipeline Rehab I-2	City of San Diego	4.5 miles of sewer lateral rehabilitation in various council districts. Repairs may include spot repairs where open trench is required.	Complete
Sewer Lateral Rehab Project J-2	City of San Diego	Rehabilitating existing 4-inch service laterals associated with completed sewer main rehabilitation projects phase J-1, J-1A, J-1B and J-1C. This includes install cleanouts for the service laterals, and point repairing laterals.	Under construction
Palm Avenue Roadway Improvements	City of San Diego	Pedestrian and traffic safety improvements on Palm Avenue from Beyer Way to Delcardo Avenue. The improvements include raised center medians, turn pockets, traffic signals, crosswalks, striping, and signage. This section of Palm Avenue is west of I-805.	Under construction

Source: CIA 2017

After proposed Project completion, traffic congestion in the area would be reduced. However, the proposed Project would not lead to changes in land uses, which have already been determined in community plans and the City General Plan. As development under Alternative 1 + IV and Alternative 2 + IV would be in an already-developed part of the City of San Diego along an existing roadway and freeway, neither Alternative 1 + IV nor Alternative 2 + IV would provide new access to areas that are currently undeveloped. Although noise levels would increase slightly for a few receptors due to future noise conditions and changes in freeway ramp alignments, the impacts are not anticipated to lead to incompatibilities with existing or future land uses.



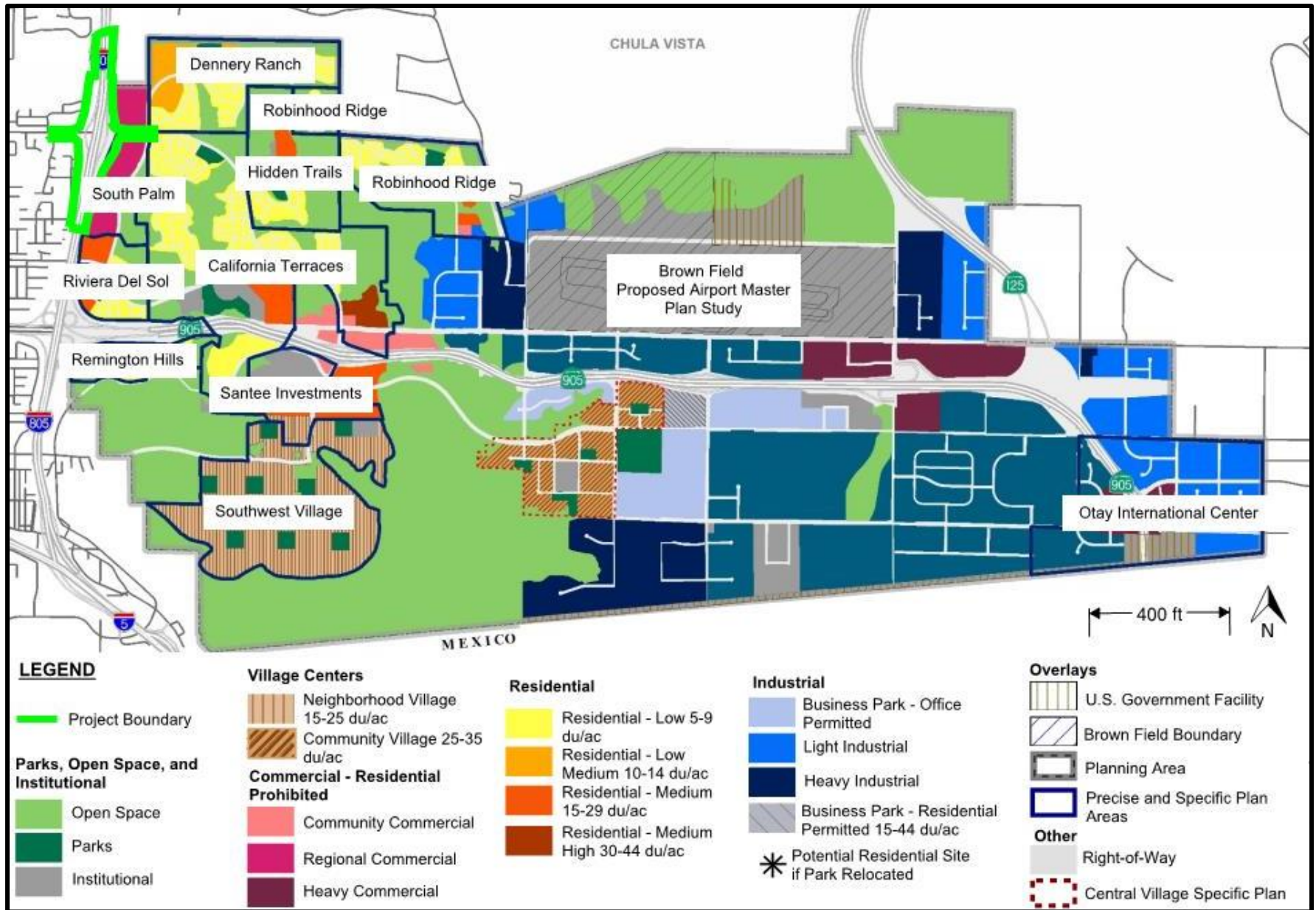


Figure 2.1.3

Otay Mesa Community Plan Precise and Specific Plan Area

### ***Cumulative Impacts***

Neither Build Alternative would cause degradation related to land use because the proposed Project would not change existing or future land uses. Therefore, cumulative impacts are not anticipated for existing and future land use.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts related to existing or future land use would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The proposed Project would not result in impacts to existing or future land use. Therefore, no avoidance, minimization, or mitigation measures would be necessary.

### **Consistency with State, Regional, and Local Plans and Programs**

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

### ***Applicable Plans and Programs***

This section identifies state, regional, and local plans and programs, and describes how the proposed Project is consistent with or conforms to relevant plan and program elements. Plans discussed include the SANDAG RTP and RTIP, the San Diego County General Plan, City of San Diego General Plan, Otay Mesa-Nestor Community Plan, and Otay Mesa Community Plan.

In addition, the proposed Project is located in the Southern Area of the City of San Diego's Multiple Species Conservation Program (MSCP) subplan area. The MSCP is designed to help implement a regional habitat preserve by coordinating proposed Project impacts and mitigation while allowing "take" permits for sensitive upland species to be issued at the local level. This habitat preserve is known as the Multi-Habitat Planning Area (MHPA), and lands within it have been designated for conservation. While Caltrans is not a signatory of the MSCP, Caltrans strives to be consistent with the MSCP guidelines to avoid cumulative impacts to wildlife resources.

#### **San Diego Association of Governments 2050 Regional Transportation Plan (RTP)**

The SANDAG 2050 RTP lays out a plan for investing transportation funds expected to come into the region over a 40-year time period. The plan identifies specific transportation projects that will receive funding, including highway improvements, transit, rail and bus facilities, high occupancy vehicle lanes, signal synchronization, intersection improvements, and freeway ramps.

#### **2018 Regional Transportation Improvement Program (RTIP)**

The RTIP, a multi-billion-dollar, multi-year listing of proposed Projects, is developed and adopted by each region's Metropolitan Planning Organization (MPO) and/or Regional Transportation Planning Agency (RTPA). SANDAG is the MPO for the San Diego Region. Any transportation projects funded with federal or state dollars or by TransNet Ordinance must be included in an approved RTIP. The RTIP covers five fiscal years, incrementally implementing the long-range 2050 RTP for the San Diego region. The 2018 RTIP was approved by the SANDAG Board of Directors on September 28, 2018 and federally approved on December 17, 2018. The proposed Project, as currently scoped, is included in the 2018 RTIP (Project ID: SD190) and is therefore consistent with this program.

#### **San Diego County General Plan**

The San Diego County General Plan, adopted by the San Diego County Board of Supervisors on August 3, 2011, is a comprehensive, long-term general plan. The elements of the general plan constitute the framework for decision-making regarding growth and development in the county and contain goals and policies that are pertinent to the proposed Project.

### City of San Diego General Plan

The City of San Diego's General Plan addresses a multitude of land use-related issues and is designed to provide policy guidance for the next 20 years and beyond. The most recent complete update of the City of San Diego's General Plan was adopted by the City Council on March 10, 2008, but it has been amended numerous times since to address changes in the direction of development, as well as to meet statutory and regulatory requirements.

### Otay Mesa-Nestor Community Plan

The Otay Mesa-Nestor Community Plan was last updated and adopted by the City Council on May 6, 1997. The Otay Mesa-Nestor Community Plan identifies issues, articulates community visions, and recommends strategies for improvement and for achieving the visions. The purpose of the plan is to serve as a guide for the future development and improvement of the community.

### Otay Mesa Community Plan

The Otay Mesa Community Plan was adopted by the City Council on March 11, 2014. It was amended on June 2, 2015 with corrections to address inconsistencies between the Land Use and Zoning Map, to make minor map and text corrections, and to remove paper streets from the maps. It contains goals, policies, and recommendations that represent a shared vision for the future of the area. It establishes a framework for ensuring that changes to the built environment, whether public or private, help maintain or improve the fabric of the community and enhance the community as a place for living, recreating, and working.

### Urban Forest Management Plan

The City Council unanimously approved the Urban Forestry Program Five Year Plan on January 24, 2017. The goal of the Urban Forest Management Plan is to foster a vigorous and engaged urban forestry program to meet the City of San Diego's commitment to climate change, carbon sequestration, stormwater reduction, and water conservation.

## **Environmental Consequences**

Consistency of the proposed Project with the plans and programs described above is discussed in **Table 2.1.2**. As detailed in this table, Alternative 1 + IV and Alternative 2 + IV would not conflict with any goals or policies of relevant plans and programs.

### ***Cumulative Impacts***

Neither Build Alternative would cause degradation related to land use plans or programs because the proposed Project would not conflict with any goals or policies. Therefore, cumulative impacts are not anticipated for consistency with state, regional, and local plans and programs.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts related to consistency with state, regional, and local plans and programs would occur.

## **Avoidance, Minimization, and/or Mitigation Measures**

The proposed Project would not result in impacts related to consistency with state, regional, and local plans and programs. Therefore, no avoidance, minimization, or mitigation measures would be necessary.



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

<b>Policy</b>	<b>Alternative 1 + IV</b>	<b>Alternative 2 + IV</b>	<b>No Build Alternative</b>
<b>SANDAG 2050 RTP</b>			
<i>Mobility Goal: The transportation system should provide the general public and those who move goods with convenient travel options. The system also should operate in a way that maximizes productivity. It should reduce the time it takes to travel, and the costs associated with travel.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve the transportation system and time it takes to travel.		<b>Conflict.</b> The No Build Alternative would not reduce congestion at the I-805/Palm Avenue Interchange, causing delays, increased travel time, and higher costs associated with travel.
<i>Mobility Policy Objective 1: Tailor transportation improvements to better connect people with jobs and other activities.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange. This capacity increase would allow for better traffic flow, reducing delay and allowing better connectivity between people, jobs, and other activities. The implementation of a Class IV <u>Separated Bikeway</u> would increase connectivity in the region for cyclists as well.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays, increased travel times, and higher costs associated with travel.
<i>Mobility Policy Objective 2: Provide convenient travel choices including transit, intercity and high-speed trains, driving, ridesharing, walking, and biking.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV includes proposed improvements to pedestrian and bicyclist infrastructure. Bus Route #688 would access the interchange and bus pads will be constructed on both NB and SB ramps. A Class IV <u>Separated Bikeway</u> and improved pedestrian facilities would provide for more convenient travel choices locally.		<b>No Conflict.</b> Bus access, driving access, pedestrian access, and bike access currently exist at the I-805/Palm Avenue Interchange.
<i>Reliability Goal: The transportation system should be reliable. Travelers should expect relatively consistent travel times, from day to day, for the same trip and mode of transportation.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve the reliability of the transportation system. The addition of the Rapid Route bus transit would allow for better, more reliable public transportation options in the area.		<b>Conflict.</b> The No Build Alternative would not reduce congestion at the I-805/Palm Avenue Interchange, causing inconsistency with travel times.
<i>Reliability Policy Objective 2: Manage the efficiency of the transportation system to improve traffic flow.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve traffic flow. Synchronized signals would improve flow through the I-805/Palm Avenue Interchange.		<b>Conflict.</b> The No Build Alternative would reduce delay, further impeding traffic flow.
<i>System Preservation &amp; Safety: The transportation system should be well maintained to protect the public's investments in transportation. It also is critical to ensure a safe regional transportation system.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would improve the existing conditions of the I-805/Palm Avenue Interchange, thus improving the transportation system. The longitudinal joints and seismic retrofitting of the current structure are in need of improvements and both build alternatives would provide these improvements.		<b>Conflict.</b> The No Build Alternative proposes no improvements to the I-805/Palm Avenue Interchange, which would result in deterioration of the roadways and pedestrian/bike facilities.
<i>System Preservation &amp; Safety: Keep the region's transportation system in a good state of repair.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would improve the existing conditions of the I-805/Palm Avenue Interchange, thus improving the transportation system. The longitudinal joints and seismic retrofitting of the current structure are in need of improvements and both build alternatives would provide these improvements.		<b>Conflict.</b> The No Build Alternative proposes no improvements to the I-805/Palm Avenue Interchange, which would result in deterioration of the roadways and pedestrian/bike facilities.
<i>System Preservation &amp; Safety: Reduce bottlenecks and increase safety by improving operations.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would reduce bottlenecks and increase safety by improving operations.		<b>Conflict.</b> The No Build Alternative would not reduce congestion at the I-805/Palm Avenue Interchange, resulting in bottlenecks and decreased safety.
<i>Social Equity Goal: The transportation system should be designed to provide an equitable level of transportation services to all segments of the population.</i>	<b>No Conflict.</b> The population within the study area of the I-805/Palm Avenue Interchange is primarily comprised of minority individuals. Alternative 1 + IV and Alternative 2 + IV would result in an improvement to the transportation system in an area with a majority population of minorities.		<b>Conflict.</b> The population in the area would be adversely impacted by the lack of improvements at the I-805/Palm Avenue Interchange.
<i>Healthy Environment Goal: The transportation system should promote environmental sustainability and foster efficient development patterns that optimize travel, housing, and employment choices. The system should encourage growth away from rural areas and closer to existing and planned development.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would optimize travel to jobs and local residences near the proposed Project. The major usage of the I-805/Palm Avenue Interchange involves transportation to and from work during the AM and PM peak periods. Improvements would decrease congestion at the intersection during these times, allowing local residents an improved commute.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. Users of the interchange would experience longer delays, increased travel time, and higher costs associated with travel.

**Table Continued on Next Page**

**(Continued) Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs**

Policy	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
<b>SANDAG 2050 RTP</b>			
<i>Healthy Environment Policy 1: Develop transportation improvements that respect and enhance the environment.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would result in minor noise, air quality, and visual impacts associated with changes in traffic patterns and volumes using the I-805/Palm Avenue Interchange. The proposed improvements would comply with all Caltrans requirements.		<b>Conflict.</b> The No Build Alternative would not offer transportation improvements. Increased congestion would result in adverse air quality impacts at the I-805/Palm Avenue Interchange.
<i>Healthy Environment Goal 2: Reduce greenhouse gas emission from vehicles and continue to improve air quality in the region.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would improve the flow of traffic. Improved traffic flow would increase the average vehicle miles per gallon, which would reduce the amount of greenhouse gas emissions. In addition, the Alternative 1 + IV and Alternative 2 + IV would include proposed bicycle improvements which would encourage use of nonmotorized vehicles thereby further reducing greenhouse gas emissions.		<b>Conflict.</b> The No Build Alternative would not offer transportation improvements. Increased congestion would result in adverse air quality impacts at the I-805/Palm Avenue Interchange.
<i>Prosperous Economy Goal 2: Enhance the goods movement system to support economic prosperity.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would allow for cargo-carrying vehicles easily transport goods throughout the region. This would enhance the goods movement system north of the border.		<b>Conflict.</b> The No Build Alternative would not reduce congestion at the I-805/Palm Avenue Interchange, resulting in bottlenecks, hindering access of cargo-carrying vehicles through the region.
<b>COUNTY OF SAN DIEGO GENERAL PLAN – LAND USE ELEMENT</b>			
<i>LU-2.8: Mitigation of Development Impacts. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would not result in significant noise, air quality, or visual impacts with applied mitigation efforts. Both air quality and visual impacts will be improved by the implementation of either Build Alternative.		<b>Conflict.</b> Air quality would worsen under the No Build Alternative due to longer delays at the Interchange.
<b>San Diego County General Plan – Mobility Element</b>			
<i>Goal M-1: A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.</i>	<b>No Conflict.</b> Alternative 1 + IV would make minor modifications to accessibility on I-805 by slightly changing the alignment and width of the on- and off-ramps of the I-805 as well as adding a new loop ramp for access to I-805 North from EB Palm Avenue.	<b>No Conflict.</b> Alternative 2 + IV would make minor modifications to accessibility on I-805 by slightly changing the alignment and width of the on- and off-ramps of the I-805.	<b>Conflict.</b> Under the No Build Alternative, future delays in Year 2040 at the Interchange would exceed 55 seconds in various locations. This delay time is unacceptable.
<i>Policy M 1.2: Interconnected Road Network. Provide an interconnected public road network with multiple connections that improve efficiency by incorporating shorter routes between trip origin and destination, disperse traffic, reduce traffic congestion in specific areas, and provide both primary and secondary access/egress routes that support emergency services during fire and other emergencies.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 +IV would increase the capacity of the I-805/Palm Avenue Interchange, reducing traffic congestion through the on- and off-ramps, which would allow for better flow both on the freeway and Palm Avenue. Emergency shoulders would be widened on Palm Avenue, allowing for access for emergency services during fire and other emergencies.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time. Congestion would obstruct access for emergency services.

Table Continued on Next Page

**(Continued) Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs**

Policy	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
<b>San Diego County General Plan – Mobility Element</b>			
<i>Policy M-2.1: Level of Service Criteria. Require development projects to provide associated road improvements necessary to achieve a level of service of “D” or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County pursuant to the criteria specifically identified in the accompanying text box (Criteria for Accepting a Road Classification with Level of Service E/F). When development is proposed on roads where a failing level of service has been accepted, require feasible mitigation in the form of road improvements or a fair share contribution to a road improvement program, consistent with the Mobility Element road network.</i>	<b>Conflict.</b> In all locations under Alternative 1 + IV, with the exception of the intersection of Palm Avenue and Palm Ridge Shopping Center Driveway, LOS would be greater than or equal to the LOS for the No Build Alternative in both 2020 and 2040. The LOS at the Palm Avenue and Palm Ridge Shopping Center Driveway intersection would be LOS D in 2020 and LOS F in 2040.	<b>No Conflict.</b> In all locations under Alternative 2 + IV, with the exception of the Palm Avenue/ I-805 NB intersection in 2020, LOS would be greater than or equal to the LOS for the No Build Alternative in both 2020 and 2040. The LOS at the Palm Avenue/ I-805 NB Intersection would be LOS D. By 2040, the LOS at this intersection would be improved under Alternative 2 + IV to LOS C.	<b>Conflict.</b> Under the No Build Alternative, intersections at Palm Avenue and Palm Ridge Shopping Center Driveway and Palm Avenue would be LOS E by 2040.
<i>Policy M-4.4: Accommodate Emergency Vehicles. Design and construct public and private roads to allow for necessary access for appropriately-sized fire apparatus and emergency vehicles while accommodating outgoing vehicles from evacuating residents.</i>	<b>No Conflict.</b> Roads that are designed under Alternative 1 + IV and Alternative 2 + IV would allow for necessary access for emergency vehicles. Shoulder improvements and the improvement of HOV lanes under either Build Alternative would improve access of emergency vehicles in the area.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time. Congestion would obstruct access for emergency services.
<i>Policy M-4.5: Context Sensitive Road Design. Design and construct roads that are compatible with the local terrain and the uses, scale and pattern of the surrounding development. Provide wildlife crossings in road design and construction where it would minimize impacts in wildlife corridors.</i>	<b>No Conflict.</b> Roads designed and constructed under Alternative 1 + IV and Alternative 2 + IV would be compatible with local terrain and the uses, scale and pattern of the surrounding development. The current use of the project area is transportation and would remain so with the implementation of future development.		<b>No Conflict.</b> The No Build Alternative would be compatible with local terrain and the uses, scale and pattern of the surrounding development.
<b>San Diego County General Plan – Conservation and Open Space Element</b>			
<i>Policy COS-7.1: Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.</i>	<b>No Conflict.</b> No qualifying archeological resources are known to be present within the proposed Project area.		
<i>Policy COS-7.2: Open Space Easements. Require developments to avoid archeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.</i>	<b>No Conflict.</b> No qualifying archeological resources are known to be present within the proposed Project area.		
<i>Policy COS-7.3: Archaeological Collections. Require the appropriate treatment and preservation of archaeological collection in a culturally appropriate manner.</i>	<b>No Conflict.</b> If unexpected archaeological items are discovered under Alternative 1 + IV and Alternative 2 + IV, appropriate treatment and/or preservation of the items would occur in compliance with standard Caltrans avoidance and minimization measures.		<b>No Conflict.</b> No improvements are proposed; therefore, no archeological items are expected to be discovered under the No Build Alternative.

Table Continued on Next Page

**(Continued) Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs**

Policy	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
<b>San Diego County General Plan – Conservation and Open Space Element</b>			
<i>Policy COS-7.4: Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.</i>	<b>No Conflict.</b> If unexpected archaeological items are discovered under Alternative 1 + IV and Alternative 2 + IV, consultation would occur in compliance with standard Caltrans practice. If cultural resources materials are discovered during construction, all earth moving activities within and around the immediate discovery will be halted.		<b>No Conflict.</b> No improvements are proposed; therefore, no archeological items are expected to be discovered under the No Build Alternative.
<i>Policy COS-7.5: Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.</i>	<b>No Conflict.</b> If unexpected human remains are discovered under Alternative 1 + IV and Alternative 2 + IV, consultation with the MLD would occur, and the handling of the remains would comply with Federal, State, and County Regulations.		<b>No Conflict.</b> No improvements are proposed; therefore, no human remains are expected to be discovered under the No Build Alternative.
<i>Policy COS-9.1: Preservation. Require the salvage and preservation of unique paleontological resources when, exposed to the elements during excavation or grading activities or other development processes.</i>	<b>No Conflict.</b> If paleontological items are discovered under Alternative 1 + IV and Alternative 2 + IV, the paleontological resources would be salvaged and preserved.		<b>No Conflict.</b> No improvements are proposed; therefore, no paleontological items are expected to be discovered under the No Build Alternative.
<i>Policy COS-9.2: Impacts of Development. Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.</i>	<b>No Conflict.</b> No natural landmarks or landforms that would qualify as "outstanding examples of major geological features" have been identified within the proposed Project area, therefore no impacts are anticipated.		<b>No Conflict.</b> No improvements are proposed, therefore no impacts to geological features are anticipated.
<i>COS-14.10: Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, low-emissions construction vehicles and equipment would be used.		<b>No Conflict.</b> No improvements are proposed; therefore, no construction vehicles will be used at the Interchange.
<i>COS-17.2: Construction and Demolition Waste. Require recycling, reduction and reuse of construction and demolition debris.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, construction and demolition debris would be recycled, reduced, and reused to the fullest extent possible.		<b>No Conflict.</b> No improvements are proposed; therefore, no construction debris would be created.
<b>San Diego County General Plan – Noise Element</b>			
<i>Goal N-4: Transportation-Related Noise Generators. A noise environment that reduces noise generated from traffic, railroads, and airports to the extent feasible.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would be fully compliant with Caltrans and FHWA noise requirements, as well as local ordinances.		<b>No Conflict.</b> Under the No Build Alternative, the Interchange would be compliant with Caltrans, FHWA, and local noise requirements.
<i>Policy N-4.6: Road Improvement projects. For County road improvement projects, evaluate the proposed project against ambient noise levels to determine whether the project would increase ambient noise levels by more than three decibels. If so, apply the limits in the noise standards listed in Table N-2 for noise sensitive land uses that may be affected by the increased noise levels. For federally-funded roadway construction projects, use the limits in the applicable Federal Highway Administration Standards.</i>	<b>No Conflict.</b> A Noise Study Report (NSR) was prepared for the proposed Project that analyzed potential increases in ambient noise levels using FHWA prescribed methodology. The proposed Project is locally funded, but the City is seeking possible federal funding for construction. Alternative 1 + IV and Alternative 2 + IV would be fully compliant with Caltrans and FHWA standards.		<b>No Conflict.</b> No improvements are proposed; therefore, no road improvement will be performed.

Table Continued on Next Page

**(Continued) Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs**

Policy	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
<b>City of San Diego General Plan – Land Use and Community Planning Element</b>			
<i>LU Goal A1: Mixed-use villages located throughout the City and connected by high-quality transit.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange. This capacity increase would reduce delay, improve transit conditions, and allow for steady traffic flow of personal vehicles as well as public transit. The installation of the Class IV <u>Separated Bikeway</u> would improve the quality of bicycle transit at the Interchange. Improved bicycle facilities would help to connect communities throughout the region.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time.
<i>LU-I.5: Strive to achieve meaningful participation for all community residents in the siting and design of public facilities.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, public outreach efforts would be conducted to include the participation and input of community residents.		<b>No Conflict.</b> No design and siting of public facilities will occur under the No Build Alternative.
<b>City of San Diego General Plan – Mobility Element</b>			
<i>Goal M-2: Responding to Physical Constraints and Preservation Goals. A road network that provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns, while supporting other General Plan goals such as providing environmental protections and enhancing community character.</i>	<b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve the road network and would result in benefits to the community. Potential burdens of the proposed Project are increased air pollution and noise. However, the benefits and potential burdens are equitable.		<b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time.
<i>Policy M-2.3: Environmentally Sensitive Road Design. Locate and design public and private roads to minimize impacts to significant biological and other environmental and visual resources. Avoid road alignments through floodplains to minimize impacts on floodplain habitats and limit need for constructing flood control measures.</i>	<b>No Conflict.</b> Impacts related to biological and other environmental and visual resources would be minimized. No proposed alignments would go through a floodplain.		<b>No Conflict.</b> No improvements are proposed, therefore no impacts related to biological and other environmental and visual resources would be expected. No floodplain encroachment would occur under the No Build Alternative.
<i>Policy M-2.5: Minimize Excess Water Runoff. Require road improvements to be designed and constructed to accommodate storm water in a manner that minimizes demands upon engineered storm water systems and to maximize the use of natural detention and infiltration techniques to mitigate environmental impacts.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, stormwater runoff is accommodated by implementing proper Construction Site, Design Pollution Prevention and Treatment BMPs.		<b>No Conflict.</b> No improvements are proposed; therefore, no improvements are necessary in the design and construction to accommodate storm water.
<b>City of San Diego General Plan – Conservation Element</b>			
<i>CE-B.4: Limit and control runoff, sedimentation, and erosion both during and after proposed construction activities.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, design measures will be implemented to control runoff, sedimentation and erosion during and after proposed construction activities. The majority of the designed slopes are proposed to be 2:1 or flatter with rounded, shaped and stepped slopes to reduce concentrated flows, and promote vegetation establishment to reduce erosion potential.		<b>No Conflict.</b> No construction is proposed; therefore, no activities will affect runoff, sedimentation, and erosion.
<i>CE-E.3: Require contractors to comply with accepted storm water pollution prevention planning practices for all projects.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, stormwater impacts by implementing proper Construction Site, Design Pollution Prevention and Treatment BMPs.		<b>No Conflict.</b> No improvements are proposed; therefore, no improvements are necessary in the design and construction to accommodate storm water.
<i>CE-E.6: Continue to encourage “Pollution Control” measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.</i>	<b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, stormwater impacts by implementing proper Construction Site, Design Pollution Prevention and Treatment BMPs.		<b>No Conflict.</b> Pollution control measures currently implemented at the Interchange will not be improved upon.

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**(Continued) Table 2.1.2 Consistency with State, Regional, and Local Plans and Programs**

Policy	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
<b>City of San Diego General Plan – Conservation Element</b>			
<p><i>CE-F.6: Encourage and provide incentives for the use of alternatives to single-occupancy vehicle use, including using public transit, carpooling, vanpooling, teleworking, bicycling, and walking. Continue to implement programs to provide City employees with incentives for the use of alternatives to single occupancy vehicles.</i></p>	<p><b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange. This capacity increase would reduce delay, improve transit conditions, and allow for steady traffic flow of personal vehicles as well as public transit. The installation of the Class IV <u>Separated Bikeway</u> would improve the quality of bicycle transit at the Interchange.</p>		<p><b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time.</p>
<p><i>CE-G.1: Preserve natural habitats pursuant to the MSCP, preserve rare plants and animals to the maximum extent practicable, and manage all City-owned native habitats to ensure their long-term biological viability.</i></p>	<p><b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would result in the disturbance of a small area of Diegan coastal sage scrub. Compensatory mitigation would be accomplished through revegetation of the temporarily disturbed area.</p>		<p><b>No Conflict.</b> The No Build Alternative would not disturb natural habitats.</p>
<b>City of San Diego General Plan – Noise Element</b>			
<p><i>NE-A.2: Assure the appropriateness of proposed developments relative to existing and future noise levels by consulting the guidelines for noise-compatible land use to minimize the effects of noise-sensitive lands uses.</i></p>	<p><b>No Conflict.</b> Under Alternative 1 + IV and Alternative 2 + IV, if it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specification. No land use in the project conflicts with existing and future noise levels.</p>		<p><b>No Conflict.</b> The No Build Alternative proposes no improvements, therefore no changes in noise are anticipated to result.</p>
<p><i>NE-A.5: Prepare noise study to address existing and future noise levels from noise sources that are specific to a community when updating community plans.</i></p>	<p><b>No Conflict.</b> A Noise Study Report (NSR) was prepared for the all Alternatives, including the No Build Alternative, that analyzed potential increases in ambient noise levels using FHWA prescribed methodology. The proposed Project is locally funded, but the City is seeking possible federal funding for construction. Alternative 1 + IV and Alternative 2 + IV would be fully compliant with Caltrans and FHWA standards.</p>		
<b>Otay Mesa Community Plan</b>			
<p><i>Goal 2: An effective transit network that provides fast and reliable service to local and regional destinations.</i></p>	<p><b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve the transit network.</p>		<p><b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time.</p>
<b>Otay Mesa Community Plan</b>			
<p><i>Goal 3: Transportation infrastructure and operations investments that facilitate goods movement and international travel, while fostering economic prosperity and a high quality of life within the community.</i></p>	<p><b>No Conflict.</b> Alternative 1 + IV and Alternative 2 + IV would increase the capacity of the I-805/Palm Avenue Interchange and would reduce delay, which would improve the transit network.</p>		<p><b>Conflict.</b> The No Build Alternative would not increase the capacity of the I-805/Palm Interchange. People using the interchange would experience longer delays and increased travel time.</p>
<b>Otay Mesa-Nestor Community Plan</b>			
<p>The <i>Otay Mesa-Nestor Community Plan</i> does not contain any policies or goals.</p>	<p><b>No Conflict.</b> The plan contains no policies or goals; therefore, no policy conflicts.</p>		
<b>Urban Forest Management Plan</b>			
<p><i>The City Council unanimously approved the Urban Forestry Program Five Year Plan on January 24, 2017. The goal of the Urban Forestry Management Plan is to foster a vigorous and engaged urban forestry program to meet the City of San Diego’s commitment to climate change, carbon sequestration, stormwater reduction, and water conservation.</i></p>	<p><b>No Conflict.</b> The proposed improvements would not interfere with the City’s commitment to climate change, carbon sequestration, stormwater reduction, or water conservation. The improvement of bicycle and pedestrian facilities would promote use of these facilities, which would support the City’s sustainability goals.</p>		<p><b>No Conflict.</b> No improvements are proposed; therefore, no interference with commitment to climate change, carbon sequestration, stormwater reduction, or water conservation is anticipated.</p>

## **Parks and Recreational Facilities**

### **Regulatory Setting**

The proposed Project will affect facilities that are protected by the Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409) and Section 4(f) of the Department of Transportation Act (Section 4(f)). The Park Preservation Act prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land. More information on impacts to the Palm Ridge Park is located in the 4(f) De Minimis Determination in **Appendix A**.

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 which provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development.

### **Affected Environment**

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017 as well as the 4(f) De Minimis Determination, dated February 2, 2018.

Three parks/recreational facilities are located within 0.5 mile of the proposed Project vicinity, as listed in **Table 2.1.3**, and described below. All three of the parks are operated by a public agency and therefore are protected by the Park Preservation Act and Section 4(f). **Figure 2.1.4** shows the location of these parks/ recreational facilities near the project area.

#### **Palm Ridge Neighborhood Park**

The land for Palm Ridge Neighborhood Park (**Figure 2.1.5**) was acquired by the City of San Diego in 1978 and initial development occurred in 1983. The park covers approximately 8 acres. Recreational elements include a small children's play area, picnic tables, multi-use courts, two dirt infields, bleachers, and a grass ball field in the middle (**Figure 2.1.6**). Other facilities include a sidewalk that curves around the ball field, a parking lot and a comfort station on the west side of the park, and landscaping around the edges (**Figure 2.1.7**).

#### **Otay Valley Regional Park**

Otay Valley Regional Park is a multi-jurisdictional planning effort by the County of San Diego and the cities of San Diego and Chula Vista. In 1990, the jurisdictions entered into a Joint Exercise of Powers Agreement for coordinated planning, acquisition, and design. The regional park encompasses approximately 8,500 acres and provides picnic and play areas, and trails for hiking, biking, and horseback riding. The regional park is open to the public year-round from sunrise to sunset.

#### **Ocean View Hills Neighborhood Park**

This 5-acre park is owned by the City of San Diego and was dedicated in 2002. It includes basketball courts, a tot lot, picnic areas and lawns.

**Table 2.1.3 Parks Located in the Project Vicinity**

Name	Address	Owner	Location Relative to Project
Palm Ridge Neighborhood Park	751 Firethorn Street	City of San Diego	Within footprint at the western end of the proposed Project
Otay Valley Regional Park	2155 Beyer Boulevard	Jointly owned and managed by County of San Diego, and Cities of San Diego and Chula Vista	Adjacent to Caltrans Right-of-Way at the northernmost corner of the proposed Project
Ocean View Hills Neighborhood Park	4947 Ocean View Hills Parkway	City of San Diego	Approximately 0.3 mile from the eastern end of the proposed Project

As discussed in **Appendix A** of this environmental document, all three of these parks are publicly owned and open to the public, therefore they also qualify for protection under Section 4(f) of the Department of Transportation Act of 1966. Palm Ridge Neighborhood Park is the only Section 4(f) resource that would be directly impacted by proposed construction activities and installation of proposed Project elements. The use of this Section 4(f) resource is discussed in detail in **Appendix A** and summarized in Environmental Consequences below.

No Section 4(f) use of Otay Valley Regional Park and Ocean View Hills Neighborhood Park would occur with the proposed Project, as documented in **Appendix A** under the heading "Resources Evaluated Relative to the Requirements of Section 4(f)."

**Environmental Consequences**

Palm Ridge Neighborhood Park is the only park that would be affected by the proposed Project. Direct impacts to Palm Ridge Neighborhood Park from either proposed Build Alternatives would occur within two areas. One area is the northern edge of the park, which parallels EB Palm Avenue (**Figure 2.1.8, Park slope parallel to Palm Avenue looking eastward and Park slope parallel to Palm Avenue looking westward**). The other area is in the northeastern corner of the park above the I-805 South on-ramp (**Figure 2.1.8, Park area affected by pipeline looking southward**). Impacts from either of the proposed Build Alternatives are summarized below and discussed in detail in **Appendix A**.





**Figure 2.1.4**  
**Parks and Recreational Facilities Near Project Area**





**Figure 2.1.5**  
**Palm Ridge Neighborhood Park**





Children's play area on the east side of the park



Multi-use courts on the east side of the park



Bleachers on the west side of the park



Grass ball field in the middle of the park

**Figure 2.1.6**  
**Recreational Elements of Palm Ridge Neighborhood Park**



Sidewalk and landscaping on the south side of the park



Parking lot on the west side of the park



Landscaping on the north side of the park



Landscaping and comfort station on the west side of the park

**Figure 2.1.7**  
**Other Facilities of Palm Ridge Neighborhood Park**





Park slope parallel to Palm Avenue, looking westward



Park slope parallel to Palm Avenue, looking eastward



Park area affected by pipeline looking southward

**Figure 2.1.8**

**Park Slope Affected by Retaining Wall & Park Area Affected by Pipeline Relocation Looking Southward**

### Alternative 1 + IV

Alternative 1 + IV would not permanently affect any of the active use facilities of the park but would affect two passive use areas (**Figure 2.1.9**).

Along the edge of the park parallel to EB Palm Avenue, a portion of the existing slope would be removed, and a vertical retaining wall would be constructed to provide an EB Class IV Separated Bikeway along the roadway. The retaining wall would be a maximum of approximately 10 feet high. The strip of park land removed would be approximately 20 feet wide and cover approximately 0.09 acre.

All of the trees (approximately 13) within the affected slope area would be removed during construction. Construction of the retaining wall would last for approximately four months. The park sidewalk would not be blocked during that time and no construction would occur on the active playing fields. Noise would temporarily increase during construction, but the proposed Project would comply with the City noise ordinance. Access to the active use facilities in the park, including all play areas and the parking lot and comfort station, would be maintained at all times during construction.

A short segment of a water pipeline would be relocated in the northeastern corner of the park above the I-805 South on-ramp. No trees or active recreational facilities are located in this area. Construction for the water pipeline would last for approximately three months, and the area would be restored to existing conditions when construction is completed.

Forecasted future noise levels on the east side of the park under Alternative 1 + IV would be approximately 2 dB above existing noise levels and would therefore not be perceptible. In addition, forecasted future noise levels in Alternative 1 + IV would be lower than the forecasted future noise levels without the proposed Project due to the change in the I-805 South on-ramp geometry. This would represent a project benefit compared to the No Build Alternative.

### Alternative 2 + IV

Alternative 2 + IV would not permanently affect any of the active use facilities of the park but would affect two passive use areas (**Figure 2.1.10**).

Due to its alignment relative to the park, Alternative 2 + IV would require a higher retaining wall and the acquisition of more park land than Alternative 1 + IV. The retaining wall would be a maximum of 17 feet high. The strip of park land removed would be approximately 35 feet wide. An additional area approximately 25 feet wide would be acquired for a permanent easement for Alternative 2 + IV where planting would be restricted due to installation of soil nails as part of the wall construction. A total of 0.22 acres of the park would be acquired for Alternative 2 + IV.

Similar to Alternative 1 + IV, all of the trees (approximately 13) within the affected slope area would be removed during construction. Conditions during construction would be similar to those described above for Alternative 1 + IV.

A slightly longer segment of the water pipeline in the northeastern corner of the park would be relocated for Alternative 2 + IV. The relocation would impact an area that would not result in the removal of any trees and would not impact any recreational facilities. Construction in this area would last for approximately three months. A small area of permanent easement totaling approximately 0.08 acre would be needed over the new location of the relocated pipeline segment in the park to limit future construction and tree planting along the pipeline alignment.

Forecasted future noise levels in Alternative 2 + IV would be the same as discussed above for Alternative 1 + IV and would represent a benefit compared to the No Build Alternative.

### ***Cumulative Impacts***

Neither Build Alternative would cause parks and recreational resources to degrade because the proposed Project would implement the measures described below in avoidance, minimization, and/or

mitigation measures. Therefore, cumulative impacts are not anticipated for parks and recreational resources.

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts to parks or recreational facilities would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

In conformance with the Park Preservation Act, the acquiring entity of the City, the San Diego Public Works Department, shall make funds or land, or both, available to the operating entity, San Diego Department of Park and Recreation, to compensate for the real property of the public park acquired for the proposed Project. As specified in PRC Section 5405, the amount of compensation for taking of park land shall be equal to one of the following:

- The cost of acquiring substitute park land of comparable characteristics and of substantially equal size where it would be usable by generally the same persons who used the existing park land and facilities;
- Substitute park land plus the cost of development of such; and
- Any combination of substitute park land and compensation.

As specified in PRC Section 5404, the operating entity may choose to improve the un-acquired portion of the park land and facilities using the funds received from the acquiring entity (if less than 10 percent and no more than one acre of park land is acquired), after holding a public hearing and upon a majority vote of its legislative body.

**Appendix A** documents the Section 4(f) De Minimis Impact Finding for the proposed Project. De minimis means that the impacts would not adversely affect the activities, features, and attributes that qualify the park for protection under Section 4(f), considering proposed avoidance, minimization, and mitigation measures. The following measures are provided in **Appendix A** to minimize impacts to Palm Ridge Neighborhood Park:

- Trees would be replaced at a 1:1 ratio, with 48" box sized trees. Location and type of trees to be planted within the park would be determined by the City Park and Recreation Department during the final design.
- The Project will include repair and/or replacement of the Palm Ridge Park surface parking lot or another improvement similar in terms of scope and scale benefitting the park and recreation facilities as mitigation. This improvement will be confirmed by the City's Public Works Department and approved by the City's Park and Recreation Department during the design phase.
- The ball field closest to Palm Avenue and adjacent sidewalk will be designated as an Environmentally Sensitive Area (ESA) and will be protected by Temporary ESA fencing during construction.
- Access to the park and parking lot from Firethorn Street will be maintained throughout construction.
- Active Construction will be avoided during special events or times of high park use. The construction schedule will be drafted in coordination with the City's Park and Recreation Department.
- Construction notifications will be posted at the park prior to the start of construction.
- Revegetation within City park land will be completed according to the City of San Diego's Landscape Standards and the Project's revegetation plan in coordination with the City's Park and Recreation Department.



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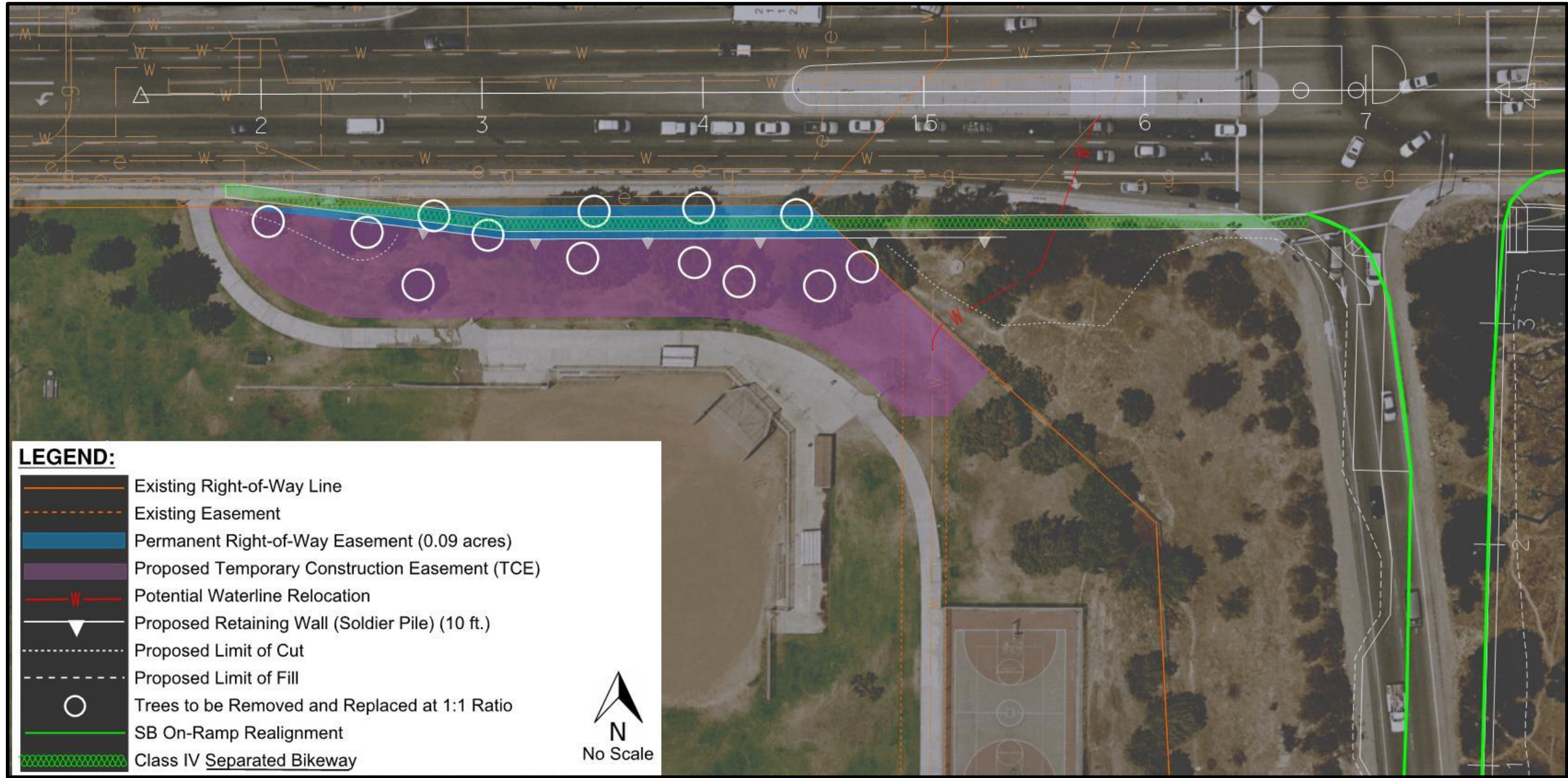


Figure 2.1.9

Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 1 + IV



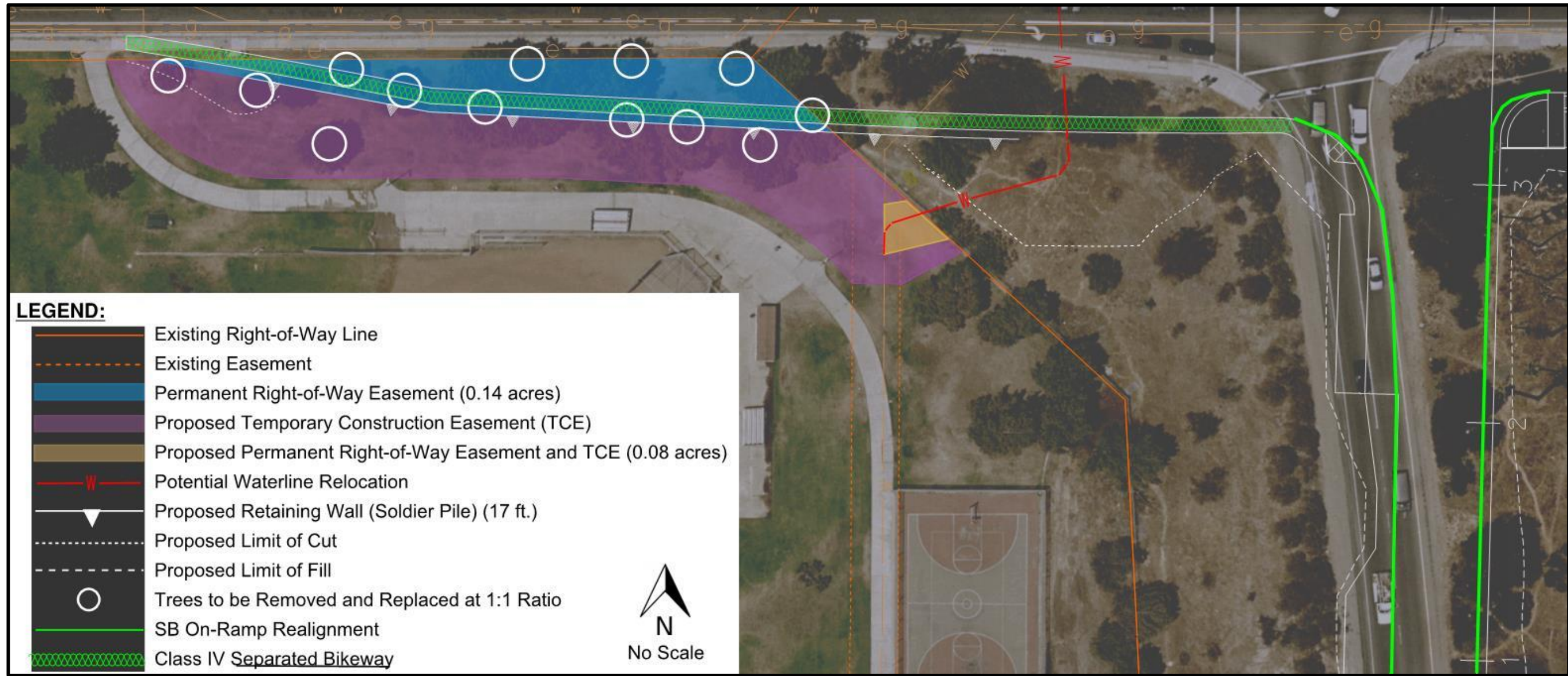


Figure 2.1.10

Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 2 + IV

## 2.1.2 Growth

### Regulatory Setting

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

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

### Affected Environment

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

On a broad regional scale, the population of San Diego County has grown since 2010 and is expected to continue growing through 2050. Population growth projections developed for SANDAG's 2050 RTP indicate that population of the county is expected to increase from 3,131,552 to 4,384,867 between 2008 and 2040, which is a 40 percent increase. According to the City of San Diego General Plan, the population of the City is expected to grow from approximately 1,307,402 people to 1,689,000 people, a 29.2 percent increase, between 2010 and 2030 (City of San Diego 2017).

At the project level, the CIA study area is located within portions of the communities of Otay Mesa-Nestor and Otay Mesa. The primary land use in the proposed Project area is residential, specifically, single-family homes, but the area also contains large parcels with commercial and other types of uses. According to the Otay Mesa-Nestor Community Plan, 95 percent of the residential land within that community has been developed. In contrast, the Otay Mesa Community Plan forecasts that the number of housing units within its jurisdiction will grow from 4,145 to 13,850, a 234 percent increase, between 2010 and 2030.

### Environmental Consequences

This analysis focuses on the influence that the proposed Project may have on growth and development in the local area. The analysis addresses "First Cut Screening" questions to identify how the proposed Project influences growth, if at all. The First Cut Screening results in the CIA are summarized below.

#### 1. *How, if at all, does the project potentially change accessibility?*

Both Build Alternatives would make minor modifications to accessibility on I-805 by slightly changing the alignment and width of the on-ramps and off-ramps of the I-805/Palm Avenue Interchange. Alternative 1 + IV would add a new loop ramp for access to I-805 North from EB Palm Avenue. While the proposed Project would reduce congestion by making these changes, neither Build Alternative would provide new access to areas that are currently undeveloped. In addition, neither Build Alternative would lead to changes in land use.

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

The proposed Project is intended to reduce existing patterns of congestion within an already developed area rather than create a new route to an area not currently served by major transportation routes. The proposed Project is located within a part of the City of San Diego that is largely built out, where the potential for growth is based on the availability of land and other limits on growth, including land use controls within local and regional plans and policies. The proposed Project itself is consistent with the goals and policies of applicable planning documents. Therefore, the proposed Project has a low potential to influence growth.

3. *Is project-related growth reasonably foreseeable as defined by NEPA?*

Future growth associated with the proposed Project is not considered reasonably foreseeable because the majority of the proposed Project area is already developed, and areas currently undeveloped are planned for growth consistent with local land use plans.

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

Project-related growth is not anticipated.

Based on the above discussion, project-related growth is not reasonably foreseeable, and no additional analysis of the growth-related effects of the proposed Project are required, including cumulative impacts.

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts related to growth would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The proposed Project would not result in growth-related impacts. Therefore, no avoidance, minimization, or mitigation measures would be necessary.

## **2.1.3 Community Impacts**

### **Community Character and Cohesion**

#### **Regulatory Setting**

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

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since the proposed 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 proposed Project's effects.



## Affected Environment

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

This section evaluates the existing community character and cohesion level in the area surrounding the proposed Project as related to population and housing characteristics and other qualities that lead to strong cohesion. Analysis of community character is based upon the demographics within the boundaries of Census Tracts 100.01, 100.03, 100.14, 133.08 and 133.13 (see **Figure 2.1.11**). Direct impacts from the proposed Project would be focused on the eastern edges of Census Tracts 100.01 and 100.03 and the western edge of Census Tract 100.14.

Population composition is defined largely by race and ethnicity, financial status, and age. Racially and ethnically homogenous areas are often highly cohesive because the community is often linked through common traditions, values, and language. Financial status determines lifestyle choices that prompt interaction and build community, such as schooling and education, shopping, employment, recreation, community service utilization, and other activities. Areas with larger populations of the elderly and stay-at-home parents tend to be more cohesive because these groups are oftentimes more active in their communities.

Census-based data regarding these characteristics are presented in **Table 2.1.4** through **Table 2.1.7** for the census tracts encompassing the proposed Project area, and for the County and City of San Diego. Income information is presented in **Section 2.1.3**, *Environmental Justice*.

### Population Characteristics

As shown in **Table 2.1.4**, the two primary populations within San Diego County are non-Hispanic white (47.0 percent of the population) and Hispanic/Latino (32.9 percent of the population). The City of San Diego population characteristics are similar to those of San Diego County. In contrast, the largest population within the census tracts encompassing the proposed Project area is Hispanic/Latino, accounting for 52.1 percent of the population, while non-Hispanic whites only constitute 14.1 percent. Within these census tracts, the Asian and African American populations at 16.5 percent are nearly double that of San Diego County at 11.2 percent.

As shown in **Table 2.1.5**, the age composition within the census tracts encompassing the proposed project area is similar to that of the overall county, with a slightly higher percentage of the population under 18 years of age and a slightly lower percentage of seniors.

### Housing Characteristics

As shown in **Table 2.1.6**, almost all housing units in the census tracts encompassing the proposed Project area are occupied, with only 6 percent vacant. Per **Table 2.1.7**, nearly 100 percent of housing units are owner-occupied, while less than 1 percent are renter-occupied. In addition, the majority of householders have lived in their units for more than 5 years.

Given the large amount of owner-occupied housing units, the high-occupancy rate of housing units, the extended average length of occupancy per housing unit, and the density of many communities along the proposed Project alignment, it is reasonable to assume a high degree of social cohesion exists within the proposed Project area.



**Table 2.1.4 Existing Regional and Local Population Characteristics—Race/Ethnicity**

Area	Total Population	Hispanic or Latino (of any race)	%	Non-Hispanic or Latino													
				White	%	Black or African American	%	Native American	%	Asian	%	Native Hawaiian-Pacific Islander	%	Other Race	%	Two or More Races	%
San Diego County	3,223,096	1,060,995	32.9%	1,515,316	47.0%	153,024	4.7%	11,698	0.4%	362,467	11.2%	13,484	0.4%	5,615	0.2%	100,497	3.1%
City of San Diego	1,359,791	408,714	30.1%	586,863	43.2%	84,155	6.2%	3,564	0.3%	224,337	16.5%	4,800	0.4%	2,347	0.2%	45,011	3.3%
Study Area*	47,881	24,924	52.1%	6,739	14.1%	3,595	7.5%	177	0.4%	10,277	21.5%	108	0.2%	54	0.1%	2,007	4.2%
Census Tract 100.01	3,724	2,443	65.6%	484	13.0%	18	0.5%	28	0.8%	603	16.2%	0	0.0%	0	0.0%	148	4.0%
Census Tract 100.03	6,499	4,324	66.5%	605	9.3%	239	3.7%	0	0.0%	840	12.9%	50	0.8%	20	0.3%	421	6.5%
Census Tract 100.14	20,663	10,403	50.3%	3,223	15.6%	2,029	9.8%	75	0.4%	4,312	20.9%	19	0.1%	11	0.1%	591	2.9%
Census Tract 133.08	3,907	3,183	81.5%	360	9.2%	116	3.0%	74	1.9%	115	2.9%	0	0.0%	4	0.1%	55	1.4%
Census Tract 133.13	13,088	4,571	34.9%	2,067	15.8%	1,193	9.1%	0	0.0%	4,407	33.7%	39	0.3%	19	0.1%	792	6.1%

\* The study area, for the purposes of this chapter, comprises the 5 census tracts in which the proposed Project would be located (see **Figure 2.1.11**). Source: U.S. Census Bureau, 2011–2015 American Community Survey, Table B03002 (2016). This is larger than 0.25 acres.

Source: CIA 2017

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**Table 2.1.5 Existing Regional and Local Housing Characteristics—Age**

Area	Total Population	Age			
		Under 18	Percentage	65 and Over	Percentage
San Diego County	3,223,096	725,197	22.5%	399,664	12.4%
City of San Diego	1,359,791	285,556	21.0%	156,376	11.5%
Study Area*	47,881	12,644	26.4%	3,562	7.4%
Census Tract 100.01	3,724	842	22.6%	529	14.2%
Census Tract 100.03	6,499	1,456	22.4%	1,033	15.9%
Census Tract 100.14	20,663	5,207	25.2%	1,116	5.4%
Census Tract 133.08	3,907	1,121	28.7%	387	9.9%
Census Tract 133.13	13,088	4,018	30.7%	497	3.8%

\* The study area, for the purposes of this chapter, comprises the 5 census tracts in which the proposed Project would be located (see **Figure 2.1.11**). Source: U.S. Census Bureau, 2011–2015 American Community Survey, Table S0601 (2016). This is larger than 0.25 acres.

Source: CIA 2017

**Table 2.1.6 Existing Regional and Local Housing Characteristics—Occupancy**

Area	Total Housing Units	Occupied Units	% of Occupied Units	Vacant Units	% of Vacant Units	Persons Per Household (Owner-Occupied Units)	Persons Per Household (Renter-Occupied Units)
San Diego County	815,322	699,232	85.8%	116,090	14.2%	3.20	3.31
City of San Diego	17,408	16,297	93.6%	1,111	6.4%	4.31	4.65
Study Area*	12,922	12,152	94.0%	770	6.0%	3.75	3.88
Census Tract 100.01	4,917	4,788	97.4%	129	2.6%	3.79	4.28
Census Tract 100.03	1,509	1,448	96.0%	61	4.0%	3.95	3.59
Census Tract 100.14	2,574	2,386	92.7%	188	7.3%	2.88	3.55

**Table Continued on Next Page**



**(Continued) Table 2.1.6 Existing Regional and Local Housing Characteristics - Occupancy**

Area	Total Housing Units	Occupied Units	% of Occupied Units	Vacant Units	% of Vacant Units	Persons Per Household (Owner-Occupied Units)	Persons Per Household (Renter-Occupied Units)
Census Tract 133.08	1,554	1,329	85.5%	225	14.5%	3.15	2.62
Census Tract 133.13	2,368	2,201	92.9%	167	7.1%	3.41	4.35

\* The study area, for the purposes of this chapter, comprises the 5 census tracts in which the proposed Project would be located (see **Figure 2.1.11**). Source: U.S. Census Bureau, 2011–2015 American Community Survey, Table DP04 (2016). This is larger than 0.25 acres.

Source: CIA 2017

**Table 2.1.7 Existing Regional and Local Housing Characteristics—Tenure**

Area	Total Housing Units	% of Owner-Occupied Housing Units	% of Renter-Occupied Housing Units	Year Householder Moved into Unit by Percentage					
				2015 or Later	2010-2014	2000-2009	1990-1999	1980-1989	1979 or Earlier
San Diego County	1,180,806	98.5%	1.5%	1.6%	33.9%	32.6%	12.8%	5.9%	5.8%
City of San Diego	522,410	98.6%	1.4%	1.7%	37.5%	29.7%	12.0%	5.6%	6.3%
Study Area*	11,942	99.2%	0.8%	1.1%	38.3%	36.1%	7.2%	4.0%	6.7%
Census Tract 100.01	1,175	100.0%	0.0%	0.0%	13.8%	28.8%	17.4%	19.1%	13.2%
Census Tract 100.03	1,532	100.0%	0.0%	0.0%	9.9%	27.4%	16.1%	12.5%	31.7%
Census Tract 100.14	4,316	100.0%	0.0%	2.0%	47.4%	41.9%	3.9%	0.0%	0.0%
Census Tract 133.08	1,038	97.3%	2.7%	0.0%	25.5%	40.0%	14.4%	4.5%	5.8%
Census Tract 133.13	3,881	98.3%	1.7%	1.0%	50.1%	34.4%	2.3%	0.2%	2.6%

\* The study area, for the purposes of this chapter, comprises the 5 census tracts in which the proposed Project would be located (see **Figure 2.1.11**). Source: U.S. Census Bureau, 2011–2015 American Community Survey, Table DP04 (2016). This is larger than 0.25 acres.

Source: CIA 2017

## **Environmental Consequences**

The area in the vicinity of the proposed Project primarily contains residential neighborhoods with single-family homes, as well as community and regional commercial development. As indicated in **Table 2.1.4** and discussed in **Section 2.1.3, *Environmental Justice***, the proposed Project area encompasses neighborhoods with a relatively high percentage of minorities compared to the County and City of San Diego as a whole. The proposed I-805/Palm Avenue Interchange improvements would not affect the existing character of these communities. Also, as discussed in **Section 2.1.3, *Relocations and Real Property Acquisition***, no displacement of any residents or businesses would result from proposed Project implementation.

Alternative 1 + IV and Alternative 2 + IV would not affect community cohesion. The proposed I-805/Palm Avenue Interchange improvements to the I-805/Palm Avenue Interchange would not introduce a barrier that would divide the community, separate residences from community facilities, or interfere with existing residential or commercial land uses.

Temporary ramp closures, full closure of I-805, and lane closure along Palm Avenue would potentially be required intermittently throughout construction. However, these closures would be short term, and alternate routes would be provided. In addition, temporary closure of sidewalks or crosswalks could occur during the construction period but would be limited to short periods, and alternate routes would be provided. Implementation of a TMP, and noise and dust control BMPs would reduce construction-related impacts.

Alternative 1 + IV and Alternative 2 + IV would not affect community character and cohesion during construction or after proposed Project completion.

### ***Cumulative Impacts***

Neither Build Alternative would cause community character and cohesion to degrade because the proposed Project would not change these community characteristics. Therefore, cumulative impacts are not anticipated for community character and cohesion.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to community character and cohesion would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The proposed Project would not result in impacts to community character and cohesion. As detailed in **Section 2.1.5, *Traffic and Transportation/Pedestrian and Bicycle Facilities***, a TMP will be implemented to minimize construction impacts on the community. No additional avoidance, minimization, or mitigation measures would be necessary.

## **Relocations and Real Property Acquisition**

### **Regulatory Setting**

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

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

A Relocation Impact Memorandum was prepared by Caltrans on March 7, 2017. This Memorandum concluded that there is no significant impact to owners, tenants, businesses or persons in possession of real property to be acquired who would qualify for relocation assistance benefits under the Uniform Relocation Assistance and Real Property Act of 1970. Field investigations resulted in the finding that relocations for residential and/or nonresidential units were not warranted for the proposed Project.

### Affected Environment

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

The proposed Project area generally contains commercial and residential development. West of the I-805/Palm Avenue Interchange, Palm Ridge Shopping Center, which includes a Chevron gas station, retail stores, banks, and a McDonalds, is located along WB Palm Avenue. Palm Ridge Neighborhood Park, which is owned by the City of San Diego, lies along EB Palm Avenue. Residential development is adjacent to Caltrans Right-of-Way west of the I-805.

East of the I-805/Palm Avenue Interchange, Kaiser Permanente medical facilities and an Arco gas station and minimart are located along WB Palm Avenue. The Palm Promenade Shopping Center, which includes a Walmart, Vons, and movie theater, is located along EB Palm Avenue and the I-805 North off-ramp. Undeveloped land lies east of the I-805 North on-ramp.

As discussed in **Section 2.1.3, Environmental Justice**, the proposed Project area encompasses neighborhoods with a relatively high percentage of minorities compared to the County and City as a whole. However, no residential property would be acquired for the proposed Project, no full acquisitions of any property would be needed, and no relocations of businesses or residents would occur. More details regarding the partial acquisitions of property needed for each Build Alternative are presented below.

### Environmental Consequences

**Table 2.1.8** identifies the proposed Right-of-Way acquisitions and permanent easements necessary to construct Alternative 1 + IV and Alternative 2 + IV. Acquisitions for either Build Alternative would be partial and would not change existing uses or cause any displacements.

**Table 2.1.8 Anticipated Property Acquisition**

APN/ Parcel #	Type of Use	Type of Acquisition	Approximate Acreage of Acquisition Alternative 1 + IV (acres)	Approximate Acreage of Acquisition Alternative 2 + IV (acres)	Acreage of Parcel (acres)
631-271-01	Palm Ridge Neighborhood Park	Permanent easement	0.090	0.22	8.16
631-042-01	Palm Promenade Shopping Center (slope adjacent to I-805 North off-ramp)	Partial acquisition + permanent easement	0.249	n/a	12.82
631-042-16	Palm Promenade Shopping Center (slope adjacent to I-805 North off-ramp)	Partial acquisition + permanent easement	0.037	n/a	3.29

**Table Continued on Next Page**

(Continued) Table 2.1.8 Anticipated Property Acquisition

APN/ Parcel #	Type of Use	Type of Acquisition	Approximate Acreage of Acquisition Alternative 1 + IV (acres)	Approximate Acreage of Acquisition Alternative 2 + IV (acres)	Acreage of Parcel (acres)
631-042-04	Palm Promenade Shopping Center (slope parallel to Palm Avenue)	Partial acquisition	n/a	0.078	5.85
624-071-04	Arco gas station and minimart	Partial acquisition	0.056	0.056	1.11
631-260-08	Palm Ridge Shopping Center	Partial acquisition	0.027	0.027	0.64

n/a = not applicable

Source: CIA 2017

### **Cumulative Impacts**

Neither of the Build Alternatives would cause degradation related to relocations and acquisitions because the proposed Project would not cause any relocations and would follow the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, in acquiring property, as described below in avoidance, minimization, and/or mitigation measures. Therefore, cumulative impacts are not anticipated for relocations and acquisitions.

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts due to relocations and real property acquisitions would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

No relocations resulting from the partial acquisition of the properties are anticipated to be needed for the proposed Project. In addition, property owners shall receive offers commensurate with market value for their properties (or portions thereof) in all Right-of-Way acquisitions. All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

### **Environmental Justice**

#### **Regulatory Setting**

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2018, this was \$25,100 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 proposed Project. Caltrans's commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in **Appendix B** of this document.



## Affected Environment

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

**Table 2.1.9** lists the median household income and percentage of individuals with income below poverty levels within San Diego County, the City of San Diego, and census tracts encompassing the proposed Project area. The table also compiles percentage of minority individuals within the same areas. Minority individuals are members of American Indian, Asian or Pacific Islander, Black, and Hispanic population groups.

The median household income of all five census tracts encompassing the proposed Project area is well above the poverty guidelines threshold created by the Department of Health and Human Services. Therefore, low-income populations have not been identified in the proposed Project area.

The census tracts encompassing the proposed Project area have a much higher proportion of minorities than the larger region. Minorities comprise approximately 86 percent of the population adjacent to the proposed Project compared to approximately 47 percent of San Diego County's population and 43 percent of the City's population. Therefore, minority populations of concern for environmental justice have been identified in the proposed Project area, and the proposed Project is subject to the provisions of EO 12898.

**Table 2.1.9 Existing Regional and Local Income and Ethnic Characteristics**

Jurisdiction/Census Tract	Median Household Income (\$)	Percentage of Families below Poverty Threshold	Minority Population (%)
San Diego County	64,309	10.6%	47.0%
City of San Diego	66,116	10.7%	43.2%
Study Area*	85,342	6.2%	85.9%
Census Tract 100.01	61,197	11.2%	87.0%
Census Tract 100.03	74,861	9.0%	90.7%
Census Tract 100.14	90,132	4.2%	84.4%
Census Tract 133.08	49,189	8.0%	90.8%
Census Tract 133.13	101,133	6.1%	84.2%

\* The study area, for the purposes of this chapter, comprises the 5 census tracts in which the proposed Project would be located (see **Figure 2.1.11**). Source: U.S. Census Bureau, 2011–2015 American Community Survey, Table DP03 (2016).

Source: CIA 2017

## Environmental Consequences

Environmental justice and equity are evaluated by comparing impacts on minority and low-income groups to impacts on non-minority or higher income populations. Impacts are considered disproportionate if they are more severe or greater in magnitude for minority and low-income populations. Impacts associated with the proposed Project would be predominantly borne by minority populations of concern for environmental justice because these populations have been identified in all census tracts in the proposed Project area. Therefore, further analysis is warranted.

Potential impacts of the Build Alternatives are addressed in other sections of this environmental document and supporting technical reports. Issues relevant to determining if impacts would be disproportionately high and adverse to the minority populations in the proposed Project area are summarized in **Table 2.1.10**.

Potentially high and adverse impacts to the minority populations in the proposed Project area could occur for the issues of Parks and Recreation, Traffic, and Visual/Aesthetics. However,

avoidance, minimization and/or mitigation measures would be incorporated into the proposed Project for these issues, as discussed in **Sections 2.1.1, 2.1.5, and 2.1.6** respectively. In addition, the proposed Project would result in benefits for minority populations in the proposed Project area. Both Alternative 1 + IV and Alternative 2 + IV would relieve traffic congestion along Palm Avenue, which would reduce delay and improve travel times for local residents who either drive or use public transit. Also, Alternative 1 + IV and Alternative 2 + IV would improve bicycle infrastructure along Palm Avenue, which would improve transportation for local residents who cycle rather than drive.

Based on the above discussion and analysis, the Build Alternatives would not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

### ***Cumulative Impacts***

Neither Build Alternative would cause conditions for environmental justice populations to degrade because the proposed Project would incorporate avoidance, minimization and/or mitigation measures into the proposed Project for issues where potentially high and adverse impacts to minority populations in the proposed Project area could occur, as discussed above. Therefore, cumulative impacts are not anticipated for environmental justice populations.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. The No Build Alternative would not relieve the anticipated increasing congestion, therefore negatively impacting Environmental Justice communities using the interchange.

### **Avoidance, Minimization, and/or Mitigation Measures**

Based on the above discussion and analysis, the two Build Alternatives will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further environmental justice analysis is required.

**Table 2.1.10 Potential Impacts Affecting Environmental Justice Populations**

Potential impact	Alternative 1 + IV	Alternative 2 + IV	No Build Alternative
Parks and Recreation	Permanent impacts to Palm Ridge Neighborhood Park would occur, including removal of an approximately 20-foot-wide strip and removal of approximately 13 trees to create a Class IV <u>Separated Bikeway</u> at street level, and relocation of a short segment of water pipeline. Avoidance, minimization, and mitigation measures are provided in <b>Section 2.1.1</b> and <b>Appendix C</b> . Impacts to the park would impact Environmental Justice Communities who utilize the park.	Permanent impacts to Palm Ridge Neighborhood Park would occur, including removal of an approximately 35-foot-wide strip and removal of approximately 13 trees to create a Class IV <u>Separated Bikeway</u> at street level, and relocation of a short segment of water pipeline. Avoidance, minimization, and mitigation measures are provided in <b>Section 2.1.1</b> and <b>Appendix C</b> . Impacts to the park would impact Environmental Justice Communities who utilize the park.	No improvements are proposed. Therefore, no impacts to parks and recreation facilities are anticipated.
Utilities/Emergency Services	Various utilities would need to be relocated, but service disruption would be minimized by coordination with utility owners. Impacts to emergency services and Environmental Justice Communities would be minimized through the implementation of a TMP. Improved traffic flow would allow facilitate transportation for emergency services.		Emergency Services would be impacted by increased congestion and longer delays. Environmental Justice Communities in the area would be adversely impacted by impeded access for Emergency Services.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Short-term traffic impacts from lane and freeway closures and detours would occur, possibly also affecting bus routes 933 and 934. Proposed construction activities and staging would cause temporary disruption along edges of parking lots and Palm Avenue. Avoidance, minimization, and mitigation measures are provided in <b>Section 2.1.5</b> . Long-term reduction in traffic congestion would occur after proposed Project completion. Environmental Justice Communities would be benefitted by improvements in alternative transit options.		No improvements in Public Transit, pedestrian, and bicycle facilities are proposed. Therefore, Environmental Justice Communities who utilize these alternative transit options would be adversely impacted by increased congestion.
Hazardous Waste/Materials	Site of a former trash dump lies within an area that would be excavated for Alternative 1 + IV. Potential issues would be avoided or minimized by the incorporation of measures recommended in the Initial Site Assessment and Aerially Deposited Lead Study in order to minimize impacts to surrounding communities.	Impacts to Environmental Justice Communities are not anticipated as the former trash dump area would not be disturbed as a part of construction.	No improvements are proposed. Therefore, no hazardous waste and materials impacts are anticipated.
Air Quality	No exceedances of air quality standards would occur from the proposed Project construction or operation. Specific measures to control dust and particulates would be incorporated into the proposed Project. Environmental Justice Communities in the area would experience improvements in air quality in the case of either Build Alternative when compared to the No Build Alternative due to capacity increases at the I-805/Palm Avenue Interchange.		No improvements are proposed. Therefore, Environmental Justice Communities in the region would be impacted by increased congestion and accompanying air quality issues at the I-805/Palm Avenue Interchange.

## 2.1.4 Utilities/Emergency Services

This section of the environmental document is based on the "I-805/Palm Avenue Interchange Improvements Project Community Impact Assessment" (CIA) dated June 30, 2017.

### Affected Environment

Underground utilities located within the proposed Project area include the following:

- Gas pipelines and electric lines owned by San Diego Gas and Electric (SDG&E);
- Telecommunication lines owned by AT&T;
- Fiber optic lines owned by Cox Communications;
- Water pipelines owned by California American Water; and
- Water and sewer pipelines and storm drain facilities owned by the City of San Diego.

Aboveground utilities within the proposed Project area include utility boxes, fire hydrants, street lights, and traffic signal poles along both sides of Palm Avenue. Power poles and electric lines owned by SDG&E parallel the I-805 North on-ramp, and EB Palm Avenue from the Vons building to Dennery Road. A table showing the affected utilities under each Build Alternative can be found in **Table 2.1.11** below.

**Table 2.1.11 Utilities Impacted by Proposed Construction**

Alternative 1 + IV			Alternative 2 + IV			No Build Alternative
Utility	Owner	Relocation Length (LF)	Utility	Owner	Relocation Length (LF)	
Electric	SDG&E	2200	Electric	SDG&E	3350	No Impacts to Utilities
Gas	SDG&E	1450	Gas	SDG&E	1890	
Water	City of San Diego	1930	Water	City of San Diego	1955	
Telephone	AT&T	1260	Telephone	AT&T	1700	
Television	Cox	115	Television	Cox	985	
Sewer	City of San Diego	470	Sewer	City of San Diego	470	
Water	California American Water	505	Water	California American Water	505	

Emergency services include fire protection and emergency medical services (EMS), and police protection. The City of San Diego provides fire protection/EMS for the area from San Diego Fire-Rescue Department Station Number 6 located at 693 Twining Avenue, approximately 0.4 mile from the proposed Project site. Police protection is provided from the San Diego Police Department Southern Division Station located at 1120 27th Street, approximately 2.2 miles from the proposed Project site.

### Environmental Consequences

#### Utilities

Utilities located inside the cells of the bridge include a 4-inch-diameter gas pipeline and various telephone conduits. Conduits for traffic signals and an irrigation system are under the sidewalks on the bridge. For either Build Alternatives, conduits located within the cells of the bridge would potentially be protected in place, although work may include relocating a gas vent and the electrical and signal interconnect lines in the existing bridge sidewalk.

A 69 kilovolt (KV) SDG&E steel power pole is located behind the sidewalk along EB Palm Avenue by the Vons building. This power pole would need to be moved as part of the road widening and replacement of the existing crib wall for Alternative 2 + IV only. The power pole is expected to remain in a public utility easement.

Multiple City storm drain facilities and water pipelines, a City sewer pipeline, and several segments of a water pipeline owned by California American Water may be relocated or reconfigured for either Build Alternative.

All potential utility relocations are expected to occur within existing City property or Caltrans Right-of-Way. These relocations are not anticipated to create any additional environmental impacts that have not been addressed in this environmental document.

### ***Emergency Services***

During construction, temporary impacts to emergency services may include delays resulting from temporary closures and detours. After construction, the proposed Project would reduce congestion and improve freeway access for all vehicles, including emergency services vehicles.

### ***Cumulative Impacts***

Neither Build Alternative would cause utilities or emergency services within the proposed Project area to degrade because relocations and protection measures would be coordinated with utility owners, and long-term improvements in traffic would benefit emergency services vehicles. Therefore, cumulative impacts are not anticipated for utilities and emergency services.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to utilities or emergency services would occur. However, congested traffic conditions that would affect all vehicles, including emergency services vehicles, would worsen in the future under the No Build Alternative.

### **Avoidance, Minimization, and/or Mitigation Measures**

Any required relocations or protection measures will be coordinated with the utility owners during the design process, including the City of San Diego, SDG&E, AT&T, Cox Communications, and California American Water. Most utility companies affected by the proposed Project would design and construct their own relocation of utilities. In addition, coordination with the Public Utilities Commission (PUC) will occur on all transmission lines exceeding 50 KV, per PUC General Order 131-D. This includes the 69 KV steel power pole located behind the sidewalk along EB Palm Avenue by the Vons building.

Impacts to emergency services during construction will be minimized by the implementation of a TMP. The TMP may include the following strategies:

- A public awareness campaign prior to and during construction;
- Motorist information strategies, including changeable message signs, and ground mounted signs; and
- Incident Management elements including Construction Zone Enhanced Enforcement Program (COZEEP) to provide police assistance and surveillance.



## 2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

### Regulatory Setting

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

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

### Affected Environment

This section is based on information provided in the "Traffic Operational Analysis, I-805/Palm Avenue Interchange," (Traffic Study) dated July 2014, the "Memorandum: Traffic Evaluation for Palm Avenue at I-805 Ramps with Class IV Bikeways," dated January 17, 2017, and "Preliminary Transportation Management Plan, Palm Avenue Bridge Widening and I-805/Palm Avenue Interchange Improvements at I-805," dated July 19, 2017.

The study area for the transportation and traffic analysis of the I-805/Palm Avenue Interchange includes the Interchanges to the north and south along I-805 (**Figure 2.1.12**). These are Main Street, located approximately 0.8 mile to the north in the City of Chula Vista, and State Route (SR)-905 located approximately 1.1 miles to the south in the City of San Diego. On Palm Avenue, the traffic study area extends from the signalized intersections of Kostner Drive/Delcardo Avenue on the west to Dennery Road on the east. Five unsignalized driveways to various commercial and medical uses between these intersections were included in the traffic analyses.

Within the study area, Palm Avenue is classified as a four-lane collector west of the I-805 ramps, and as a six- to seven-lane prime arterial between the I-805 South ramps and Dennery Road. East of Dennery Road, Palm Avenue becomes Ocean View Hills Parkway. The Interchange with I-805 is in a spread diamond configuration and the ramps are all signalized at Palm Avenue.

In the Traffic Study (2014), traffic conditions in morning (AM) and evening (PM) peak hours were analyzed for the following years:

- Year 2014 (Existing conditions);
- Year 2020 (opening day); and
- Year 2040 (20-year horizon).

The future conditions were modeled for the No Build Alternative and the two Build Alternatives. The methodology for developing traffic volumes in the different years, including existing conditions, is described in the traffic study. Traffic conditions were evaluated in terms of intersection delay, ramp intersection conditions, intersection queuing, roadway segment capacity, freeway segment capacity, freeway ramp merge/diverge/weave operations, and ramp meter operations. Results for existing conditions are summarized below. Results for future conditions are presented in the Environmental Consequences section.

## ***Existing Traffic Conditions***

Existing Average Daily Traffic (ADT) and AM/PM peak hour turning movement volumes in the traffic study area are graphically presented in **Figure 2.1.12**. ADT is the total volume of traffic during a stated period divided by the number of days in that period. These volumes provide the basis for the analysis of existing traffic conditions discussed below.

### Intersection Delay

As discussed in **Section 1.2.2**, the ability of intersections to carry traffic is expressed in terms of Level of Service (LOS). For signalized intersections, LOS is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. LOS criteria for signalized intersections are defined in **Figure 1.2.1**. The criteria for unsignalized intersections are similar, although the thresholds for delay are slightly lower. The minimum performance standard for intersection operation is LOS D. Unacceptable LOS begins at LOS E, when delay exceeds 55 seconds per vehicle for signalized intersections or 35 seconds per vehicle for unsignalized intersections. The existing peak hour intersection LOS is summarized in **Table 2.1.12**. All intersections in the traffic study area operate at LOS D or better under existing conditions.

### Ramp Intersection Conditions

Traffic conditions at the I-805 ramp intersections within the proposed Project limits were evaluated using the Caltrans intersecting lane vehicles (ILV) procedure (**Table 2.1.13**). In this analysis, an intersection is considered to be at capacity when the ILV analysis results in 1,500 vehicles per hour. The ILV analysis indicates that under existing conditions the I-805/Palm Interchange intersections are approaching capacity and other Palm Avenue intersections are operating below capacity. However, the combined I-805 Ramps/Palm Avenue intersection is noted as operating at "Above Capacity" with an ILV total of 1,609 in the PM peak hour under existing conditions.

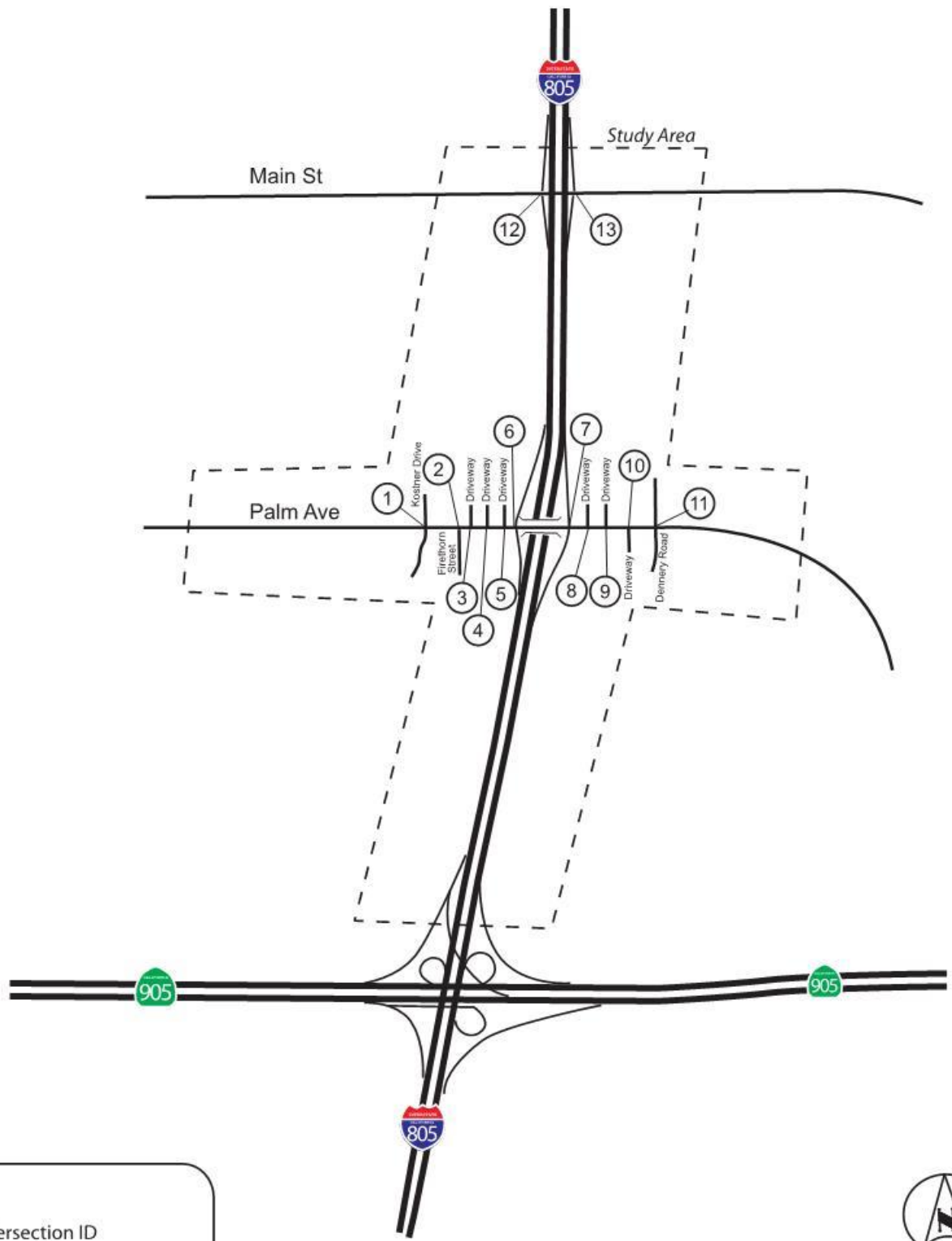
### Intersection Queuing

At signalized intersections, traffic waiting for a green light can often back up and potentially fill the entire length of the turn lane pocket. If these back-ups or queues spill outside of turn pockets into through lanes or extend into the adjacent intersection, congestion can occur. Additionally, traffic backed up from a traffic signal at the end of an exit ramp could potentially back up onto the freeway, decreasing freeway mainline capacity. For intersections in the study area, potential intersection queuing length was modeled and compared to the available storage length of the turn lane pockets. Queuing was identified as problematic if the potential queue length exceeded the turn lane pocket storage length. This situation occurred under existing conditions at the following locations:

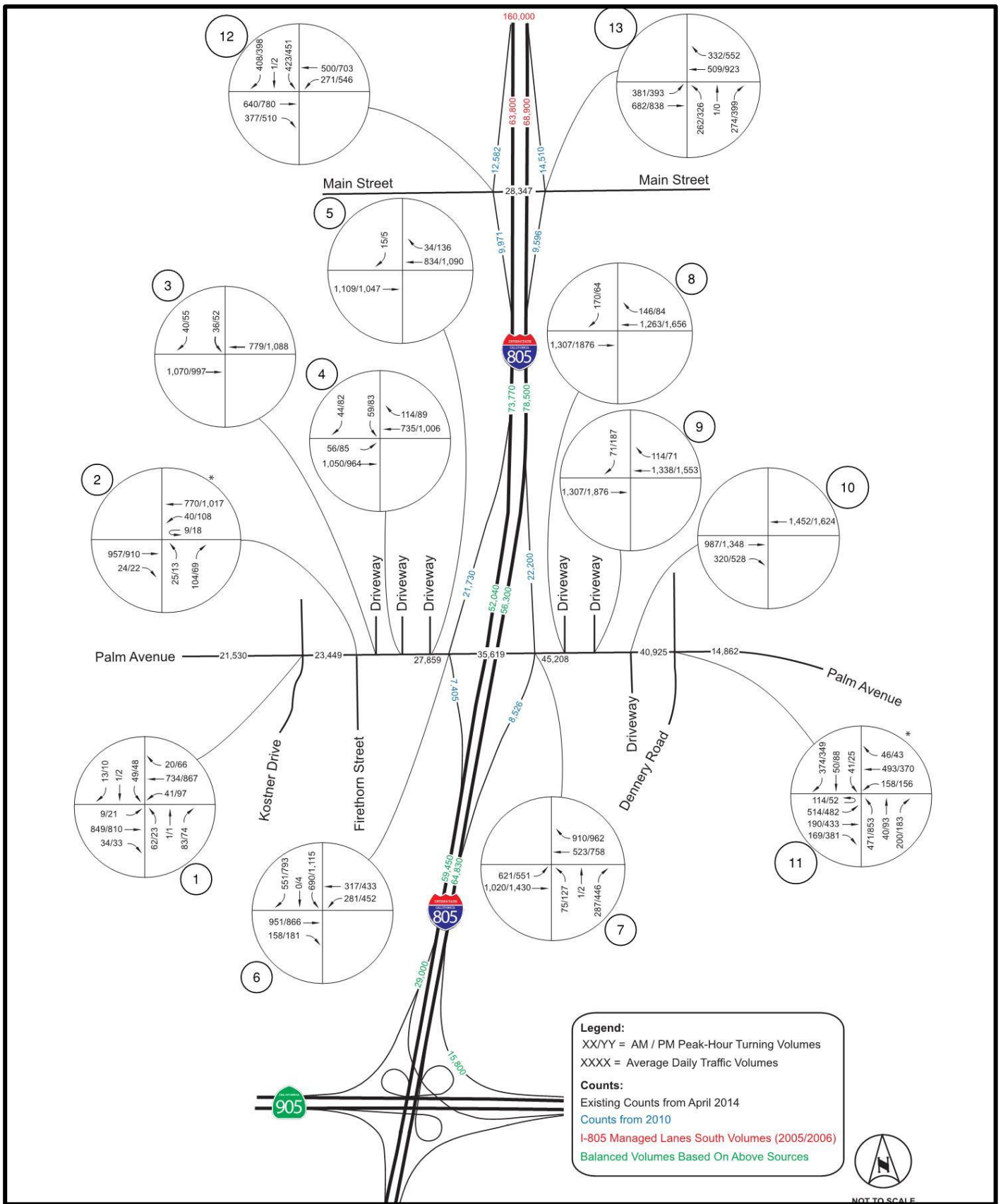
- Palm Avenue/I-805 South - EB right (AM and PM) and WB left (PM) turns to the I-805 South on-ramp, and EB through movement (AM and PM); and
- Palm Avenue/I-805 North - EB left (AM and PM) and WB right (AM and PM) turns to the I-805 North on-ramp, WB through movement (PM), and right turn onto Palm Avenue from the I-805 North off-ramp (PM).

### Roadway Segment Capacity

The ability of roadways to carry traffic is expressed in LOS, where capacities are related to the volume of traffic, or ADT, carried on a particular type of road. The City of San Diego generally requires all roadway segments to operate at LOS D or better. As shown in **Table 2.1.14**, Palm Avenue operates at acceptable LOS under existing conditions, except from Firethorn Street to the I-805 South ramps, where the roadway segment operates at LOS E.



**Figure 2.1.12**  
**Project Traffic Study**



**Figure 2.1.13**  
**Existing ADT and Peak Hour Turning Movement Volumes**

### Freeway Segment Capacity

Freeway segment LOS is based on a volume to capacity (V/C) ratio, assuming 2,000 vehicles per lane per hour on general purpose lanes and 1,200 vehicles per hour on auxiliary lanes. The minimum acceptable standard of LOS E would occur when the V/C ratio exceeds 0.93, and unacceptable LOS F would occur when the V/C ratio exceeds 1.0. Under existing conditions, all freeway segments in the traffic study area operate at acceptable LOS.

### Freeway Ramp Merge/Diverge/Weave Operations

The weaving LOS was determined from the computed volume in the outside (#4) lane and auxiliary lane compared to the theoretical capacity of each of these lanes, assumed to be 1,800 vehicles per lane. The minimum performance standard for weaving/merge/diverge sections is LOS D, which would occur when the V/C exceeds 0.8. Under existing conditions, the I-805 South freeway weaving section from Main Street to Palm Avenue exceeds LOS D capacity during the PM peak, but the other sections operate at LOS D or better.

### Ramp Meter Operations

The ramp meter analysis quantifies queues created by ramp metering. These queues may affect traffic operations on the surrounding road network if they spill past the entrance ramp queuing capacity. Queue lengths were compared to the available storage provided on the ramp and within the turn pockets on Palm Avenue. Maximum and average queue lengths and associated delays were calculated and are provided in the traffic study. None of the ramps studied are currently metered, so no ramp metering analysis was conducted under existing conditions.

## ***Multi-modal Facilities***

### Bus Route 933/934

Bus routes 933/934 operate on Palm Avenue, passing the Imperial Beach Fishing Pier, Montgomery High School, Kaiser Permanente, Mar Vista High School, Southwest High School, Wal-Mart at Palm Promenade, Naval Auxiliary Landing Field, Palm Avenue Trolley Station, and the Iris Avenue Trolley Station. Both buses travel the same street route with Route 933 operating east to west and Route 934 operating west to east. Stops for routes 933 and 934 located in the study area are on Palm Avenue in front of the Arco gas station west of I-805, at Dennery Road, and at Firethorn Street.

### Bicycle Facilities

The *2015 San Diego Region Bike Map* indicates a Class II Bikeway along Palm Avenue, except through the Interchange with I-805 where the bicycle facilities are designated as a Class 3 bicycle route. The shoulders of I-805 North and South are designated for freeway shoulder bike access between the Palm Avenue Interchange and the Main Street Interchange to the north. Five-foot-wide striped bicycle lanes exist along both sides of Palm Avenue through the extent of the proposed Project area.

### Pedestrian Facilities

Five-foot-wide sidewalks are located along both sides of Palm Avenue through the proposed Project area.

## **Environmental Consequences**

Future Year 2020 and 2040 ADT and AM/PM peak hour turning movement volumes in the traffic study area are graphically presented in **Figure 2.1.14** and **Figure 2.1.15**, respectively. These volumes provide the basis for the analysis of traffic conditions with the two Build Alternatives compared to the No Build Alternative, as discussed below.



**Table 2.1.12 Existing Conditions Peak Hour Intersection LOS Summary**

	Intersection	Traffic Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
1	Palm Avenue & Delcardo Avenue	Signal	AM	8.9	A
			PM	9.2	A
2	Palm Avenue & Firethorn Street	Signal	AM	5.1	A
			PM	5.9	A
3	Palm Ave & McDonald's Driveway	One-Way Stop	AM	15.1	C
			PM	20.7	C
4	Palm Ave & Palm Ridge Shopping Center Driveway	One-Way Stop	AM	18.4	C
			PM	27.6	D
5	Palm Ave & Shopping Center Driveway	One-Way Stop	AM	10.9	B
			PM	12.4	B
6	Palm Ave & I-805 SB	Signal	AM	27.7	C
			PM	47.1	D
7	Palm Ave & I-805 NB	Signal	AM	31.6	C
			PM	32.0	C
8	Palm Ave & Arco Gas Station Driveway	One-Way Stop	AM	14.3	B
			PM	15.0	C
9	Palm Ave & Kaiser Permanente Driveway	One-Way Stop	AM	10.9	B
			PM	16.6	C
10	Palm Ave & Palm Promenade Driveway	No Conflicting Movements	AM	-	-
			PM	-	-
11	Palm Ave & Dennery Road	Signal	AM	27.5	C
			PM	36.3	D
12	Main St & I-805 SB	Signal	AM	15.9	B
			PM	17.1	B
13	Main St & I-805 NB	Signal	AM	19.7	B
			PM	18.5	B

Notes:

**Bold** values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 7.0

Source: Traffic Study 2014

**Table 2.1.13 Existing Conditions Peak Hour Signalized Interchange and Signalized Intersection ILV Summary**

Intersection	Peak Hour	Existing	
		IIV Total	Capacity
2 Firethorn Street/Palm Avenue (City of San Diego)	AM	637	Below Capacity
	PM	744	Below Capacity
6 I-805 SB Ramps/Palm Avenue (City of San Diego)	AM	962	Below Capacity
	PM	1228	Approaching Capacity
7 I-805 NB Ramps/Palm Avenue (City of San Diego)	AM	1332	Approaching Capacity
	PM	1461	Approaching Capacity
Combined I-805 Ramps/Palm Avenue (City of San Diego)	AM	1449	Approaching Capacity
	PM	1609	<b>Above Capacity</b>
11 Dennery Rd/Palm Avenue (City of San Diego)	AM	827	Below Capacity
	PM	907	Below Capacity
12 I-805 SB Ramps/Main Street (City of Chula Vista)	AM	868	Below Capacity
	PM	1103	Below Capacity
13 I-805 NB Ramps/Main Street (City of Chula Vista)	AM	848	Below Capacity
	PM	1039	Below Capacity

Notes:  
**Bold** values indicate intersections operating above capacity.

Source: Traffic Study 2014

**Table 2.1.14 Existing Conditions Roadway Segment Analysis Summary**

Roadway Segment	Roadway Classification (a)	LOS E Capacity	ADT (b)	V/C RATIO (c)	LOS
<b>Palm Ave</b>					
Kostner Drive to Firethorn Street	4 Lane Collector	30,000	23,449	0.782	D
Firethorn St to I-805 SB Ramps	4 Lane Collector	30,000	27,859	0.929	<b>E</b>
I-805 SB Ramps to I-805 NB Ramps	6 Lane Prime Arterial	60,000	35,619	0.594	C
I-805 NB Ramps to Dennery Rd	7 Lane Prime Arterial	70,000	45,208	0.646	C

Notes:  
**Bold** values indicate roadway segments operating at LOS E or F.  
(a) Existing roads street classification based on City of San Diego classifications.  
(b) Average Daily Traffic (ADT) volumes for the roadway segments.  
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

Source: Traffic Study 2014

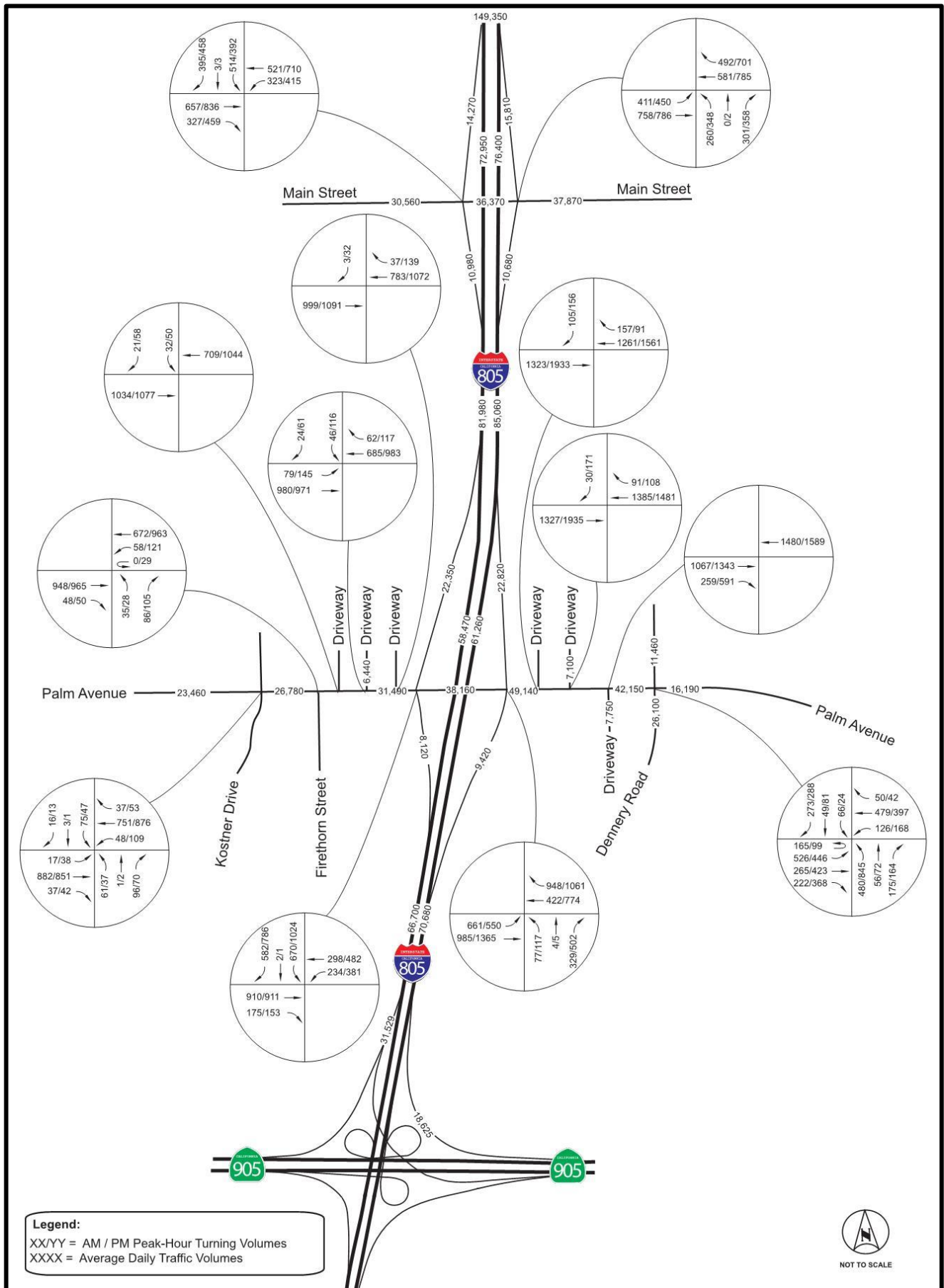


Figure 2.1.14

Year 2020 ADT and Peak Hour Turning Movement Volumes

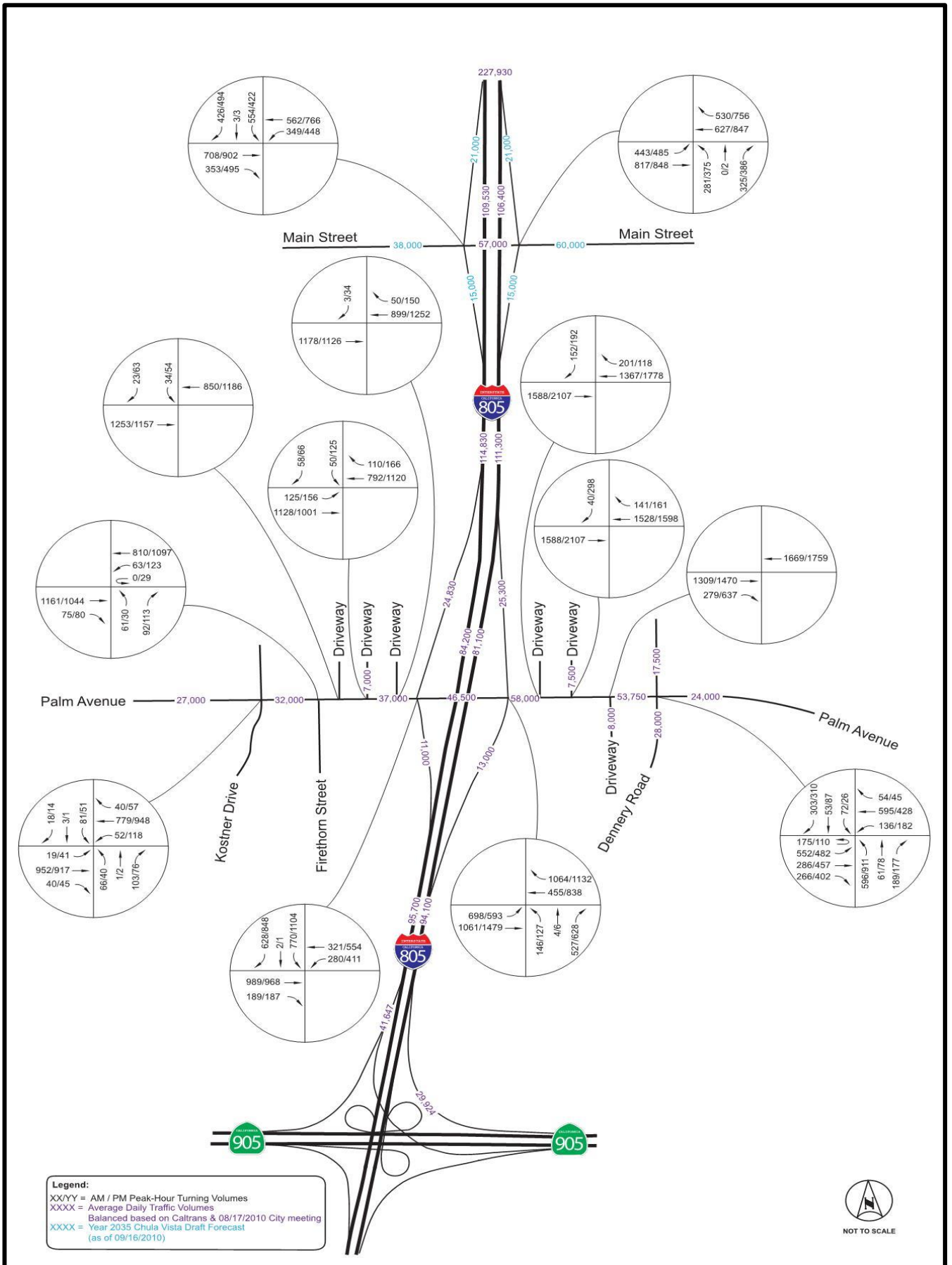


Figure 2.1.15

Year 2040 ADT and Peak Hour Turning Movement Volumes

## ***Alternative 1 + IV Traffic Conditions***

### Intersection Delay

The peak hour intersection operation results in the No Build Alternative and Alternative 1 + IV in 2020 and 2040 are compared in **Table 2.1.15**. In 2020, all intersections in the traffic study area would operate at LOS D or better with both the No Build Alternative and Alternative 1 + IV. In 2040, two intersections would operate below LOS D in the No Build Alternative: The Palm Ridge Shopping Center Driveway (LOS E in the PM peak), and Palm Avenue/I-805 North on-ramp (LOS E in the AM and PM peaks). While the driveway delay is greater in Alternative 1 + IV (LOS F in the PM peak), the operation of the I-805 North ramps in Alternative 1 + IV would improve to LOS C and LOS B in the AM and PM peaks, respectively.

### Ramp Intersection Conditions

Results for traffic conditions at the I-805 ramp intersections evaluated using the Caltrans ILV procedure in the No Build Alternative and Alternative 1 + IV in 2020 and 2040 are summarized in **Table 2.1.16**. In the No Build Alternative, the combined I-805 ramps intersection would operate above capacity in the PM peak in 2020; this intersection and the I-805 North ramp intersection would operate at above capacity in both the AM and PM peak in 2040. Alternative 1 + IV would improve these operations to either approaching capacity or below capacity in both 2020 and 2040.

### Intersection Queuing

In the No Build Alternative, queues forming at signalized intersections under existing conditions would worsen in 2020 and 2040. Alternative 1 + IV would eliminate all queues except for the EB through movement at I-805 South in the 2040 PM peak, where adjacent driveways would be blocked. For these vehicles, a two-way left-turn lane could be utilized for waiting by SB left-turning vehicles until they find gaps in both EB and WB traffic on Palm Avenue.

### Roadway Segment Capacity

In the No Build Alternative, Palm Avenue from Kostner Drive to Firethorn Street and Firethorn Street to the I-805 South ramps would operate at LOS E or LOS F in 2020 and 2040 due to projected increases in traffic volumes (**Table 2.1.17**). The extent to which the addition of the turn lanes and other proposed improvements in Alternative 1 + IV would increase the overall road capacity was not quantified in the traffic study. Thus, Palm Avenue in Alternative 1 + IV is anticipated to operate similarly as in the No Build Alternative in terms of roadway segment capacity.

### Freeway Segment Capacity

Freeway segment LOS in 2020 and 2040 in Alternative 1 + IV is expected to be equal to the No Build Alternative because Alternative 1 + IV would not include any features affecting the freeway segment analysis. Each segment would operate at LOS E or better in 2020 and 2040.

### Freeway Ramp Merge/Diverge/Weave Operations

In the No Build Alternative, only I-805 South between Main Street and Palm Avenue would have weaving volumes above LOS D capacity in 2020. By 2040 all of the segments studied would have weaving volumes above LOS D capacity. The weaving LOS in 2020 and 2040 in Alternative 1 + IV would be similar to the No Build Alternative, except the I-805 North merge from Palm Avenue to Main Street would be improved to be equal to or below LOS D capacity.

### Ramp Meter Operations

The ramp meter analysis assumed ramp meters would operational by 2020, even with No Build. Delays would be a maximum of four minutes at the I-805 South ramp but would exceed 40 minutes at the I-805 North ramp in the No Build Alternative. In Alternative 1 + IV, the delays at I-805 South would be approximately the same, and the severe delays at I-805 North would be reduced to a maximum of 2 minutes, with no queues beyond the ramp storage length.



## ***Alternative 2 + IV Traffic Conditions***

### Intersection Delay

The peak hour intersection operation results in the No Build Alternative and Alternative 2 + IV in 2020 and 2040 are compared in **Table 2.1.18**. The peak hour intersection operation in Alternative 2 + IV would be an improvement over the No Build Alternative and would be similar to Alternative 1 + IV. The Palm Ridge Shopping Center Driveway would operate with less delay (LOS E instead of LOS F) in 2040 in Alternative 2 + IV. The I-805 North ramps in Alternative 2 + IV would be LOS C in the AM and PM peaks.

### Ramp Intersection Conditions

Results for traffic conditions at the I-805 ramp intersections evaluated using the Caltrans ILV procedure in the No Build Alternative and Alternative 2 + IV in 2020 and 2040 are summarized in **Table 2.1.19**. The results show that all intersections would operate at approaching capacity or below capacity during both peak periods in Alternative 2 + IV, similar to the results in Alternative 1 + IV. This would be an improvement over the No Build Alternative.

### Intersection Queuing

In Alternative 2 + IV, all queues that would occur in the No Build Alternative would be eliminated in 2020 and 2040. In Alternative 2 + IV, no queues would exceed the available storage lengths, even at I-805 South where driveways would be blocked in Alternative 1 + IV.

### Roadway Segment Capacity

In the No Build Alternative, Palm Avenue from Kostner Drive to Firethorn Street and Firethorn Street to the I-805 South ramps would operate at LOS E or LOS F in 2020 and 2040 due to projected increases in traffic volumes (**Table 2.1.17**). The extent to which the addition of the turn lanes and other proposed improvements in Alternative 2 + IV would increase the overall road capacity was not quantified in the traffic study. Thus, Palm Avenue in Alternative 2 + IV is anticipated to operate similarly as in the No Build Alternative in terms of roadway segment capacity.

### Freeway Segment Capacity

As in Alternative 1 + IV, freeway segment LOS in 2020 and 2040 in Alternative 2 + IV is expected to be the same as in the No Build Alternative because Alternative 2 + IV would not include any features that would affect the freeway segment analysis. Each freeway segment would operate at LOS E or better in 2020 and 2040.

### Freeway Ramp Merge/Diverge/Weave Operations

The weaving LOS in 2020 and 2040 in Alternative 2 + IV would be similar to the No Build Alternative. By 2040, all of the segments studied would have weaving volumes above LOS D capacity. The addition of the second diverge lane from I-805 South at Palm Avenue in Alternative 2 + IV would not improve the weaving section.

### Ramp Meter Operations

In Alternative 2 + IV, delays would be a maximum of four minutes at the I-805 South ramp, with no queues beyond the ramp storage length in 2020 and 2040, similar to Alternative 1 + IV. At the I-805 North ramp, the average delay would be 6 minutes and queues would average 0.5 mile in 2020 and 2040, which would not be as much of an improvement over the No Build Alternative as in Alternative 1 + IV. Alternative 2 + IV would substantially reduce delays due to ramp metering compared to the No Build Alternative.

### ***Bicycle Facilities Conditions***

Accommodating a Class IV Separated Bikeway along Palm Avenue would involve installing an exclusive bicycle phase in the EB and WB directions at the signals. A traffic evaluation was conducted to determine how the ramp intersections would operate in 2040 in the AM and PM peak hour conditions with various levels of "calls" by bicyclists and pedestrians.

**Table 2.1.15 Alternative 1 + IV and No Build Peak Hour Intersection LOS Summary**

YEAR 2020 AND 2040											
Intersection	Traffic Control	Peak Hour	Year 2020 No Build		Year 2020 ALT 1 + IV		Year 2040 No Build		Year 2040 ALT 1 + IV		
			Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	
1	Palm Avenue & Delcardo Avenue	Signal	AM	12.1	B	15.2	B	15.4	B	15.7	B
			PM	14.6	B	14.1	B	17.7	B	13.6	B
2	Palm Avenue & Firethorn Street	Signal	AM	5.9	A	7.7	A	9.7	A	9.1	A
			PM	14.5	B	13.8	B	16.2	B	8.8	A
3	Palm Avenue & McDonald's Driveway	One-Way Stop	AM	14.6	B	14.6	B	15.7	C	15.9	C
			PM	18.8	C	19.5	C	21.9	C	23.0	C
4	Palm Avenue & Palm Ridge Shopping Center Driveway	One-Way Stop	AM	17.2	C	17.4	C	21.0	C	21.1	C
			PM	31.3	D	32.5	D	45.8	<b>E</b>	59.6	<b>F</b>
5	Palm Ave & Shopping Center Driveway	One-Way Stop	AM	10.7	B	10.9	B	11.4	B	11.4	B
			PM	12.4	B	12.7	B	13.4	B	13.8	B
6	Palm Avenue & I-805 SB	Signal	AM	23.8	C	25.4	C	39.7	D	28.4	C
			PM	37.5	D	27.6	C	46.6	D	35.0	D
7	Palm Avenue & I-805 NB	Signal	AM	33.6	C	13.8	B	63.1	<b>E</b>	34.3	C
			PM	32.6	C	9.8	A	61.1	<b>E</b>	18.5	B
8	Palm Avenue & Arco Gas Station Driveway	One-Way Stop	AM	12.5	B	11.6	B	12.9	B	11.6	B
			PM	15.4	C	15.4	C	19.6	C	18.6	C
9	Palm Avenue & Kaiser Permanente Driveway	One-Way Stop	AM	10.5	B	10.3	B	11.0	B	10.2	B
			PM	14.3	B	14.3	B	22.2	C	20.7	C
10	Palm Avenue & Palm Promenade Driveway	No Conflicting Movements	AM	-	-	-	-	-	-	-	-
			PM	-	-	-	-	-	-	-	-
11	Palm Avenue & Dennery Road	Signal	AM	24.3	C	36.5	D	38.1	D	46.0	D
			PM	38.8	D	41.9	D	44.8	D	44.5	D
12	Main Street & I-805 SB	Signal	AM	17.7	B	17.7	B	15.8	B	15.8	B
			PM	18.2	B	18.2	B	21.4	C	21.4	C
13	Main Street & I-805 NB	Signal	AM	21.0	C	21.0	C	16.8	B	16.8	B
			PM	19.5	B	19.5	B	21.8	C	21.8	C

Notes:

**Bold** values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 *Highway Capacity Manual* and performed using Synchro 7.0

Source: Traffic Study 2014

**Table 2.1.16 Alternative 1 + IV and No Build Peak Hour ILV Summary**

YEAR 2020						
Intersection	Peak Hour	No Build		Alternative 1 + IV		
		ILV Total	Capacity	ILV Total	Capacity	
2 Firethorn St/Palm Ave (City of San Diego)	AM	677	Below Capacity	677	Below Capacity	
	PM	762	Below Capacity	762	Below Capacity	
6 I-805 SB Ramps/Palm Ave (City of San Diego)	AM	990	Below Capacity	907	Below Capacity	
	PM	1251	Approaching Capacity	1159	Below Capacity	
7 I-805 NB Ramps/Palm Ave (City of San Diego)	AM	1381	Approaching Capacity	744	Below Capacity	
	PM	1492	Approaching Capacity	722	Below Capacity	
Combined I-805 Ramps/Palm Ave (City of San Diego)	AM	1488	Approaching Capacity	907	Below Capacity	
	PM	1638	<b>Above Capacity</b>	1159	Below Capacity	
11 Dennery Rd/Palm Ave (City of San Diego)	AM	856	Below Capacity	856	Below Capacity	
	PM	926	Below Capacity	926	Below Capacity	
12 I-805 SB Ramps/Main St (City of Chula Vista)	AM	885	Below Capacity	885	Below Capacity	
	PM	1125	Below Capacity	1125	Below Capacity	
13 I-805 NB Ramps/Main St (City of Chula Vista)	AM	865	Below Capacity	865	Below Capacity	
	PM	1060	Below Capacity	1060	Below Capacity	
YEAR 2040						
Intersection	Peak Hour	No Build		Alternative 1 + IV		
		ILV Total	Capacity	ILV Total	Capacity	
2 Firethorn St/Palm Ave (City of San Diego)	AM	834	Below Capacity	834	Below Capacity	
	PM	828	Below Capacity	828	Below Capacity	
6 I-805 SB Ramps/Palm Ave (City of San Diego)	AM	1102	Below Capacity	1020	Below Capacity	
	PM	1341	Approaching Capacity	1242	Approaching Capacity	
7 I-805 NB Ramps/Palm Ave (City of San Diego)	AM	1582	<b>Above Capacity</b>	831	Below Capacity	
	PM	1619	<b>Above Capacity</b>	810	Below Capacity	
Combined I-805 Ramps/Palm Ave (City of San Diego)	AM	1646	<b>Above Capacity</b>	1020	Below Capacity	
	PM	1754	<b>Above Capacity</b>	1242	Approaching Capacity	
11 Dennery Rd/Palm Ave (City of San Diego)	AM	977	Below Capacity	977	Below Capacity	
	PM	998	Below Capacity	998	Below Capacity	
12 I-805 SB Ramps/Main St (City of Chula Vista)	AM	955	Below Capacity	955	Below Capacity	
	PM	1213	Approaching Capacity	1213	Approaching Capacity	
13 I-805 NB Ramps/Main St (City of Chula Vista)	AM	933	Below Capacity	933	Below Capacity	
	PM	1143	Below Capacity	1143	Below Capacity	
Notes: <1200 = Below Capacity, 1200 - 1500 = Approaching Capacity, >1500 = Above Capacity <b>Bold</b> values indicate intersections operating above capacity.						

Source: Traffic Study 2014

**Table 2.1.17 No Build Roadway Segment Analysis Summary**

Roadway Segment	Roadway Classification	LOS E Capacity	Existing			2020 Baseline			2040 Baseline		
			ADT	Ratio (a)	LOS	ADT	Ratio (a)	LOS	ADT	Ratio (a)	LOS
<b>Palm Avenue</b>											
Kostner Drive to Firethorn Street	4 Lane Collector	30,000	23,449	0.782	D	26,780	0.893	<b>E</b>	32,000	1.067	<b>F</b>
Firethorn Street to I-805 SB Ramps	4 Lane Collector	30,000	27,859	0.929	<b>E</b>	31,490	1.050	<b>F</b>	37,000	1.233	<b>F</b>
I-805 SB Ramps to I-805 NB Ramps	6 Lane Prime Arterial	60,000	35,619	0.594	C	38,160	0.636	C	46,500	0.775	C
I-805 NB Ramps to Dennery Road	7 Lane Prime Arterial	70,000	45,208	0.646	C	49,140	0.702	C	58,000	0.829	C

Notes:

**Bold** values indicate roadway segments operating at LOS E or F.

(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

Source: Traffic Study 2014



**Table 2.1.18 Alternative 2 + IV and No Build Peak Hour Intersection LOS Summary**

YEAR 2020 and 2040											
Intersection		Traffic Control	Peak Hour	Year 2020 No Build		Year 2020 ALT 2 + IV		Year 2040 No Build		Year 2040 ALT 2 + IV	
				Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
1	Palm Avenue & Delcardo Avenue	Signal	AM	12.1	B	14.3	B	15.4	B	15.3	B
			PM	14.6	B	12.7	B	17.7	B	16.8	B
2	Palm Avenue & Firethorn Street	Signal	AM	5.9	A	7.4	A	9.7	A	9.2	A
			PM	14.5	B	13.6	B	16.2	B	15.6	B
3	Palm Avenue & McDonald's Driveway	One-Way Stop	AM	14.6	B	14.6	B	15.7	C	15.9	C
			PM	18.8	C	19.8	C	21.9	C	23.0	C
4	Palm Avenue & Palm Ridge Shopping Center Driveway	One-Way Stop	AM	17.2	C	17.4	C	21.0	C	21.2	C
			PM	31.3	D	32.6	D	45.8	E	48.3	E
5	Palm Avenue & Shopping Center Driveway	One-Way Stop	AM	10.7	B	10.9	B	11.4	B	11.4	B
			PM	12.4	B	12.7	B	13.4	B	13.8	B
6	Palm Avenue & I-805 SB	Signal	AM	23.8	C	27.2	C	39.7	D	28.7	C
			PM	37.5	D	29.9	C	46.6	D	32.9	C
7	Palm Avenue & I-805 NB	Signal	AM	33.6	C	43.8	D	63.1	E	29.5	C
			PM	32.6	C	28.7	C	61.1	E	21.2	C
8	Palm Avenue & Arco Gas Station Driveway	One-Way Stop	AM	12.5	B	11.9	B	12.9	B	11.6	B
			PM	15.4	C	15.9	C	19.6	C	18.6	C
9	Palm Avenue & Kaiser Permanente Driveway	One-Way Stop	AM	10.5	B	10.6	B	11.0	B	10.2	B
			PM	14.3	B	14.5	B	22.2	C	20.7	C
10	Palm Avenue & Palm Promenade Driveway	No Conflicting	AM	-	-	-	-	-	-	-	-
			PM	-	-	-	-	-	-	-	-
11	Palm Avenue & Dennerly Road	Signal	AM	24.3	C	34.9	C	38.1	D	48.9	D
			PM	38.8	D	38.3	D	44.8	D	44.7	D
12	Main Street & I-805 SB	Signal	AM	17.7	B	17.7	B	15.8	B	15.8	B
			PM	18.2	B	18.2	B	21.4	C	21.4	C
13	Main Street & I-805 NB	Signal	AM	21.0	C	21.0	C	16.8	B	16.8	B
			PM	19.5	B	19.5	B	21.8	C	21.8	C

Notes:

**Bold** values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 7.0

Source: Traffic Study 2014

**Table 2.1.19 Alternative 2 + IV and No Build Peak Hour ILV Summary**

YEAR 2020						
Intersection	Peak Hour	No Build		Alternative 2 + IV		
		ILV Total	Capacity	ILV Total	Capacity	
2	Firethorn Street/Palm Avenue (City of San Diego)	AM	677	Below Capacity	677	Below Capacity
		PM	762	Below Capacity	762	Below Capacity
6	I-805 SB Ramps/Palm Avenue (City of San Diego)	AM	990	Below Capacity	907	Below Capacity
		PM	1251	Approaching Capacity	1159	Below Capacity
7	I-805 NB Ramps/Palm Avenue (City of San Diego)	AM	1381	Approaching Capacity	930	Below Capacity
		PM	1492	Approaching Capacity	996	Below Capacity
	Combined I-805 Ramps/Palm Avenue (City of San Diego)	AM	1488	Approaching Capacity	1056	Below Capacity
		PM	1638	<b>Above Capacity</b>	1190	Below Capacity
11	Dennery Rd/Palm Ave (City of San Diego)	AM	856	Below Capacity	856	Below Capacity
		PM	926	Below Capacity	926	Below Capacity
12	I-805 SB Ramps/Main St (City of Chula Vista)	AM	885	Below Capacity	885	Below Capacity
		PM	1125	Below Capacity	1125	Below Capacity
13	I-805 NB Ramps/Main St (City of Chula Vista)	AM	865	Below Capacity	865	Below Capacity
		PM	1060	Below Capacity	1060	Below Capacity
YEAR 2040						
2	Firethorn St/Palm Ave (City of San Diego)	AM	834	Below Capacity	834	Below Capacity
		PM	828	Below Capacity	828	Below Capacity
6	I-805 SB Ramps/Palm Ave (City of San Diego)	AM	1102	Below Capacity	1020	Below Capacity
		PM	1341	Approaching Capacity	1242	Approaching Capacity
7	I-805 NB Ramps/Palm Ave (City of San Diego)	AM	1582	<b>Above Capacity</b>	1080	Below Capacity
		PM	1619	<b>Above Capacity</b>	1100	Below Capacity
	Combined I-805 Ramps/Palm Ave (City of San Diego)	AM	1646	<b>Above Capacity</b>	1169	Below Capacity
		PM	1754	<b>Above Capacity</b>	1277	Approaching Capacity
11	Dennery Rd/Palm Ave (City of San Diego)	AM	977	Below Capacity	977	Below Capacity
		PM	998	Below Capacity	998	Below Capacity
12	I-805 SB Ramps/Main St (City of Chula Vista)	AM	955	Below Capacity	955	Below Capacity
		PM	1213	Approaching Capacity	1213	Approaching Capacity
13	I-805 NB Ramps/Main St (City of Chula Vista)	AM	933	Below Capacity	933	Below Capacity
		PM	1143	Below Capacity	1143	Below Capacity
Notes: <1200 = Below Capacity, 1200 - 1500 = Approaching Capacity, >1500 = Above Capacity <b>Bold</b> values indicate intersections operating above capacity.						

Source: Traffic Study 2014

The evaluation concluded that the Build Alternatives would generally operate at an acceptable LOS based on a reasonable amount of pedestrian and bicycle volume at the intersections. Extreme levels (20 bicycle and 10 pedestrian calls) of these exclusive calls would result in LOS E or worse conditions. Based on the analysis, and the target level of service threshold established by Caltrans of LOS C-D, Alternative 1 + IV would have more spare capacity to best support the exclusive pedestrian or bicycle phase assuming non-extreme bicycle and pedestrian calls. In Alternative 1 + IV, the I-805/Palm Avenue Interchange would operate between LOS C and LOS D during the AM peak hour and between LOS D and LOS E in the PM peak hour for all pedestrian and bicycle scenarios analyzed. However, in Alternative 2 + IV, the I-805 North ramp would operate as low as LOS F depending on the number of bicycle and pedestrian calls.

### ***Americans with Disabilities Act (ADA)***

All work for the proposed Project would comply with the ADA, including work for typical pedestrian facilities such as sidewalks, driveways, curb ramps, curb cuts, crosswalks, and associated signage along local streets and connections with local streets affected by the proposed Project. Existing curb ramps within the proposed Project footprint would be evaluated during the design phase and any non-compliant ramps would be replaced with compliant ADA ramps. Sidewalks installed along Palm Avenue would provide a minimum five-foot clear width. During construction, pedestrian access in conformance with ADA would be maintained through the use of temporary curb ramps and pedestrian detours that may route pedestrians to one or another side of Palm Avenue.

### ***Construction Impacts***

#### Construction Phasing

Both of the Build Alternatives would involve phasing of construction, where an initial interim phase would be completed by 2022 and proposed remaining ultimate phase Project features would begin in 2028 and be completed by 2030. The interim phase of both Build Alternatives would widen the Palm Avenue bridge to the south and widen the I-805 North on-ramp and roadway approaches.

In addition, a retaining wall would be constructed along the EB side of Palm Avenue within Palm Ridge Neighborhood Park and Caltrans Right-of-Way to allow installation of a Class IV Separated Bikeway. Preliminary Stage Construction exhibits are provided in Appendix D of the Preliminary TMP (2017). To minimize traffic disturbance and maintain traffic movements, more detailed stage construction plans would be prepared during final design. Potential impacts to vehicular, bicycle, and pedestrian facilities during either phase of proposed Project construction for both Build Alternatives are described below.

#### Freeway Impacts

Construction of the proposed improvements for both Build Alternatives would require temporary closures of lanes as well as short-term night closure of the I-805 freeway for partial demolition of the Palm Avenue overcrossing bridge and for placement of temporary bridge framework. Proposed construction activities would also require temporary detours that would change as the work progresses. Temporary closure of I-805 North and south would occur on different nights.

Off-peak, night-time, and weekend work is anticipated during construction of temporary pavement, demolition of existing structures, placement of new bridge girders, deployment of temporary lane closures, and changes to traffic patterns for accommodation of the various stages of construction.

### Roadway Impacts

Traffic would be maintained on existing Palm Avenue and ramps through the various stages of construction, although delays above normal would be anticipated. Temporary ramp transitions may be needed to connect segments of newly constructed ramps with existing segments. Temporary freeway detours would be implemented during construction and may involve retiming of traffic signals along local streets to accommodate the diverted traffic volume.

Special events may increase traffic that could conflict with the proposed construction activities. For example, the City of Chula Vista Police Department typically modifies traffic patterns at Main Street and Orange Avenue/Olympic Parkway during Amphitheatre events. The modified traffic patterns associated with the Amphitheatre events could impact streets adjacent to I-805 as well as the freeway. Motorists on I-805 South are routed to Palm Avenue to loop back onto I-805 North during these events.

### Bus Route Impacts

Existing Metropolitan Transit System (MTS) bus routes may be impacted during the widening stage of the overcrossing bridge and EB and WB Palm Avenue. Bus routes 933 and 934 use the Palm Avenue overcrossing to service stops along Palm Avenue and adjacent streets that could be impacted due to increased traffic congestion and construction at the bus stop locations. Bus stops in the project limit will be temporarily relocated during construction. New bus pads will be installed on the I-805 on-ramps in order to accommodate a new Rapid Route 688 that travels between San Ysidro and Sorrento Mesa via the Interstate 805 corridor.

During construction, the #934 bus route on eastbound and the #933 bus route on westbound Palm Avenue would be maintained. Coordination approval with MTS will be required for the specific plans for temporary relocation of bus stops during construction. These plans will be developed during the PS&E phase for this project.

### Bicycle Facilities Impacts

Existing bicycle lanes and routes must be maintained through the construction zone. The shoulders of I-805 North and south from the I-805/Palm Avenue Interchange north to the Main Street Interchange are designated for freeway shoulder bike access. The lack of nearby alternate crossings of the Otay River make detours from the freeway shoulder bike access unreasonable. The shortest detour from the freeway shoulder would add approximately 4.3 miles to the bicycle route during construction. As a result, it is recommended bicycle access be maintained on the I-805 North and south Palm Avenue ramps, between Palm Avenue and Main Street, during construction. The use of k-rail and/or a temporary asphalt bike path may be necessary during certain stages of construction to allow for bicycle traffic. During construction, one side of the Class II Bikeway would be available, and bicyclists would be diverted to one side.

### Pedestrian Facilities Impacts

During construction, pedestrians would need to be diverted to the sidewalk on one or another side of Palm Avenue, depending on the focus of proposed construction activity at different times. Construction of certain elements may need to be conducted in substages to maintain pedestrian access through the construction area.

### ***Cumulative Impacts***

Neither Build Alternative would cause traffic and transportation or pedestrian and bicycle facilities to degrade because both Build Alternatives would improve long-term operations for vehicles and transit as well as for pedestrians and cyclists. Therefore, negative cumulative impacts are not anticipated for these facilities.

## ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to traffic and transportation, or pedestrian and bicycle facilities would occur. However, congested traffic conditions would worsen in the future, as analyzed in this section, and no improvements would be made to pedestrian and bicycle facilities.

## **Avoidance, Minimization, and/or Mitigation Measures**

A Preliminary TMP has been prepared for the proposed Project (2017). The objectives of the TMP include reducing traffic delay due to proposed construction activities, maintaining traffic flow throughout the corridor and the surrounding areas, maintaining bicycle and pedestrian access across I-805 and on Palm Avenue, and providing a safe environment for the work force and motoring public. The TMP is subject to change as required by changing circumstances.

The recommended Preliminary TMP elements include a Public Awareness Campaign (PAC), motorist information strategies, incident management programs, construction strategies, alternate route strategies, and demand management. These elements are summarized below and discussed in more detail in the Preliminary TMP (2017).

### Public Awareness Campaign (PAC)

A PAC would educate motorists, merchants, residents, elected officials and governmental agencies about construction impacts, which would enhance public acceptance and reduce traffic demand in the construction zone by encouraging alternate routes, carpooling, or traveling outside of closure hours. Preliminary target audiences identified for this proposed Project include the following:

- Resident motorists;
- Pedestrians and cyclists;
- Montgomery High School, Montgomery Adult School, Independent Studies High School, Montgomery Middle School, Ocean View Hills School, Finney Elementary School, Juarez Lincoln Elementary School, Silver Wing Elementary School, Howard Pence Elementary, and the Otay Mesa Branch Library;
- Palm Promenade (including Wal-Mart, Vons, AMC Theatres, Home Depot, and Wells Fargo Bank), Palm Ridge Shopping Center (including McDonald's and KFC), and the Montgomery Plaza Shopping Center;
- Kaiser Permanente Medical Care;
- SANDAG, Otay Mesa-Nestor Community Planning Group, and the Otay Mesa Planning Group;
- City of San Diego Department of Park and Recreation;
- U.S. Postal Service;
- Trinity Fellowship Christian Church, Berean Bible Baptist Academy;
- Mattress Firm Amphitheater;
- MTS; and
- Trucking Industry.

The public awareness campaign would include information regarding emergency services and access to emergency services such as Kaiser Permanente. Public notices will be made available during construction so that access to emergency services would not be impacted.



### Motorist Information Strategies

Motorist information strategies include portable changeable message signs (PCMS), ground mounted signs, Caltrans highway information network (CHIN), and SANDAG's 5-1-1 traffic service. PCMS would alert motorists on Palm Avenue and I-805 of proposed construction activities prior to reaching the work zone, thereby encouraging them to take an alternate route. Ground mounted signs would be placed at various street locations along Palm Avenue and at potential detour locations in advance of the detour event so motorists can plan to avoid the construction area and/or detour.

The CHIN is a 24-hour information hotline and website with updated information regarding the condition of the California State Highway System, including information about full closures, one-way traffic controls, lane closures, construction maintenance projects, and emergencies. SANDAG's 5-1-1 Traffic service provides free on-demand, up-to-the-minute traffic conditions and driving times for personalized routes. These services help motorists make informed decisions about avoiding potentially congested areas to reduce driving frustration and travel delays.

### Incident Management

The primary incident management program proposed in the Preliminary TMP is the COZEEP, which involves using the California Highway Patrol to assist including during the following proposed Project proposed construction activities:

- Placement and removal of temporary railing and re-striping;
- Night time operations and where workers are on foot in the work zone;
- Replacement of cantilevered or bridge-mounted overhead sign panels in various locations;
- Construction of auxiliary lanes, bridges, I-805/Palm Avenue Interchange, and gore areas at ramps; and
- Full freeway closures.

The presence of law enforcement officials typically slows traffic through the work zone and provides for a timely response to issues such as disabled vehicles or impending congestion.

Other incident management programs proposed in the Preliminary TMP include establishing a Traffic Management Team to assess problem areas and assist in implementing solutions.

### Construction Strategies

Construction strategies include phasing the proposed Project into an initial interim phase and ultimate proposed Project features phase. This would spread construction over a longer period but reduce the intensity of proposed construction activity in the proposed Project area.

Additional construction strategies include lane closures, total facility closure, off-peak/night/weekend work, and consideration for potential conflicts with other proposed Projects and special events.

### Alternate Route Strategies

Alternative route strategies would draw some traffic volume away from the proposed Project area. Temporary detours would be implemented during construction of this proposed Project, including having traffic exit the freeway at the Palm Avenue off-ramps and travel on the roadway to the corresponding on-ramp to continue their travels, in order to avoid driving underneath the bridge. Commuter traffic would be encouraged to avoid the work area and utilize I-5 as an alternate route. Depending on the origin of the commute, travelers could utilize portions of Palm Avenue (west of the Interchange with I-805), Ocean View Hills Parkway, Del Sol Boulevard, Picador Boulevard, and Route 905 to reach I-5 and complete their commute.

## Demand Management

Telecommuting and variable work hours like the 9/80 work schedule would reduce traffic through the construction zone at peak times and could be implemented for the population living adjacent to the proposed Project but employed, for example, in downtown San Diego or the Sorrento Valley/UTC/Golden Triangle area. Coordination with employment centers regarding variable work hours and telecommuting could take place as part of the Public Awareness Campaign.

### **2.1.6 Visual/Aesthetics**

#### **Regulatory Setting**

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

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

#### **Affected Environment**

This section is based on information provided in the “Visual Impact Assessment, Interstate 805/Palm Avenue Interchange Improvements” dated August 16, 2017.

#### ***Visual Setting***

The proposed Project location and setting provides the context for determining the type of changes to the existing visual environment. The proposed Project is located on I-805 in the part of San Diego that is south of the City of Chula Vista in San Diego County, California. The area that may be directly impacted by the proposed Project extends along Palm Avenue from approximately 150 feet east of Firethorn Street to approximately 250 feet west of Denney Road and includes the bridge and NB and SB I-805 on- and off-ramps. Along the main line of I-805, the proposed Project area extends from a point 2,300 feet south of the Palm Avenue overcrossing to 2,375 feet north of the Palm Avenue overcrossing.

The landscape within the proposed Project area is characterized by freeway plantings steeply sloping down to the interstate with urban development above the freeway corridor and adjacent to I-805. The freeway slopes are planted with low-growing grasses, brown during the summer months, and a random mixture of low-growing, nondescript native shrubs. Freeway slopes are dominated by mature eucalyptus and pepper trees which continues up and down the I-805 corridor outside of the proposed Project limits. Palm trees accent the four intersections of the off- and on-ramps at Palm Avenue. Along the ridge of the freeway slopes, the land use within the proposed Project corridor is primarily urban consisting of commercial areas near the intersection of Palm Avenue and I-805 and transitions to residential moving away from the main intersection of roads. The residential parcels are surrounded by fencing adjacent to the freeway in various material types, but mostly wood fences, some of which have been tagged with graffiti.

No scenic resources exist within the proposed Project vicinity and the proposed Project is not within a designated State Scenic Highway.

## ***Visual Assessment Units (Character/Quality)***

Visual resources of the proposed Project setting are defined and identified below by assessing visual character and visual quality in the proposed Project corridor. Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the proposed Project corridor before and after the construction of the proposed Project.

### Visual Character

Visual character includes attributes such as form, line, color, and texture and is used to describe, not evaluate; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed Project would be with the existing condition by using visual character attributes as an indicator. For this proposed Project the following attributes were considered:

- Form - visual mass or shape;
- Line - edges or linear definition;
- Color - reflective brightness (light, dark) and hue (red, green);
- Texture - surface coarseness;
- Dominance - position, size, or contrast;
- Scale - apparent size as it relates to the surroundings;
- Diversity - a variety of visual patterns; and
- Continuity - uninterrupted flow of form, line, color, or textural pattern.

### Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the proposed Project corridor. Public attitudes validate the assessed level of quality and predict how changes to the proposed Project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur because of the proposed Project. The three criteria for evaluating visual quality are defined below:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements;
- Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions; and
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

## ***Resource Change***

The existing visual resources within the proposed Project limits include Palm Ridge Park and mature eucalyptus trees along the freeway.

Palm Ridge Park is an open space amenity in an urban setting with mature trees within the lawn area in front of the sidewalk along Palm Avenue. The park and ballfield are a destination for the nearby local neighborhood and provide green, open views to the community and travelers. Palm Ridge Park, which falls within the Otay Mesa-Nestor Community Area of San Diego is located within the proposed Project boundary. The Otay Mesa-Nestor Community Plan doesn't specifically mention the park, although the park does contain several mature pine trees at its

northern boundary adjacent to Palm Avenue which would be considered a visual resource for the area.

The overall resource change for both Build Alternatives with regards to the mature tree loss in both the park and along the freeway would be moderate. However, Alternative 2 + IV preserves more of the existing trees on the NB off-ramp. While a loss of trees is pertinent, the proposed Project proposes to replace the trees at the same ratio of the loss as a proposed Project feature.

### ***Key Views***

For additional figures of Key Views, refer to the Visual Impact Assessment Technical Study.

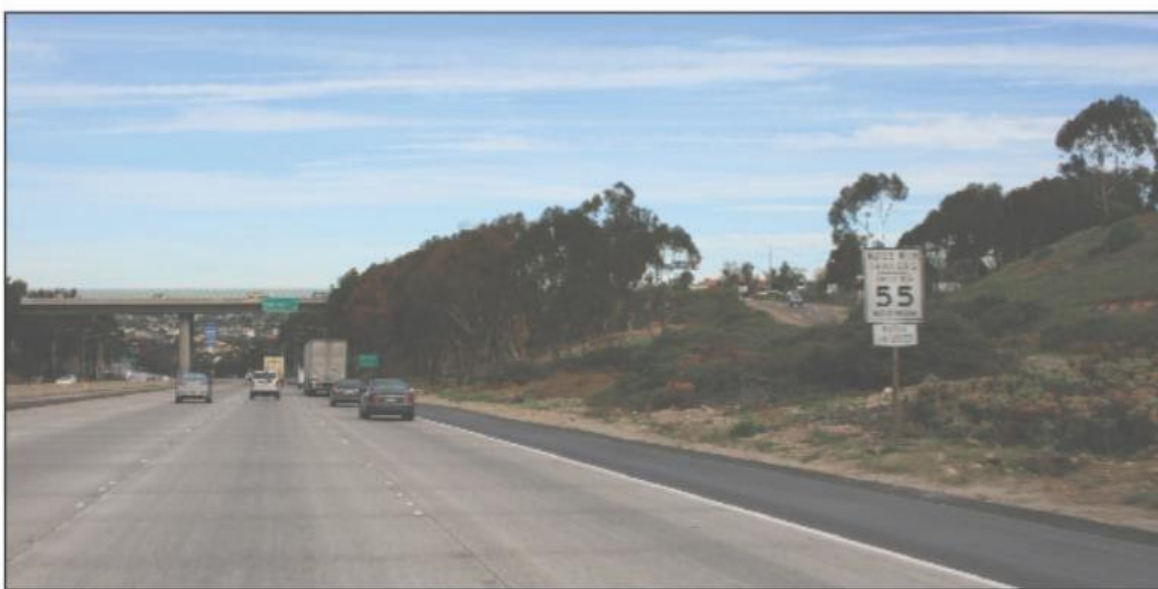
- Simulation 1 (**Figure 2.1.16**) looks north on I-805 within the freeway corridor; viewers include freeway drivers;
- Simulation 2 (**Figure 2.1.17**) looks southwest on Palm Avenue towards Palm Ridge Park; viewers include pedestrians or cyclists;
- Simulation 3 (**Figure 2.1.18**) looks east from Palm Ridge Park; viewers include recreational users in the park;
- Simulation 4 (**Figure 2.1.19**) looks west near the intersection of Palm Avenue and Dennery Road; viewers include transit users;
- Simulation 5 (**Figure 2.1.20**) is the view from the freeway looking NB just before crossing under the Palm Avenue bridge; viewers include drivers on the freeway;
- Simulation 6 (**Figure 2.1.21**) looks west on Palm Avenue; viewers include local drivers, cyclists or pedestrians; and
- Simulation 7 (**Figure 2.1.22**) looks west from the commercial development across Palm Avenue from the Palm Ridge Park; viewers include retail and commercial workers and customers.



Alternate 1 + IV view looking Northwest on Interstate 805 Northbound



Alternate 2 + IV view looking Northwest on Interstate 805 Northbound



Keyview Photograph Location

Existing Condition view looking Northwest on Interstate 805 Northbound

Figure 2.1.16  
Simulation #1 – Key Views Looking Northwest on Interstate 805 Northbound





Alternate 1 + IV view looking Southwest on Palm Avenue Westbound



Alternate 2 + IV view looking Southwest on Palm Avenue Westbound



Existing Condition view looking Southwest on Palm Avenue Westbound



Keyview Photograph Location



**Figure 2.1.17**  
**Simulation #2 – Key Views Looking Southwest on Palm Avenue Westbound**

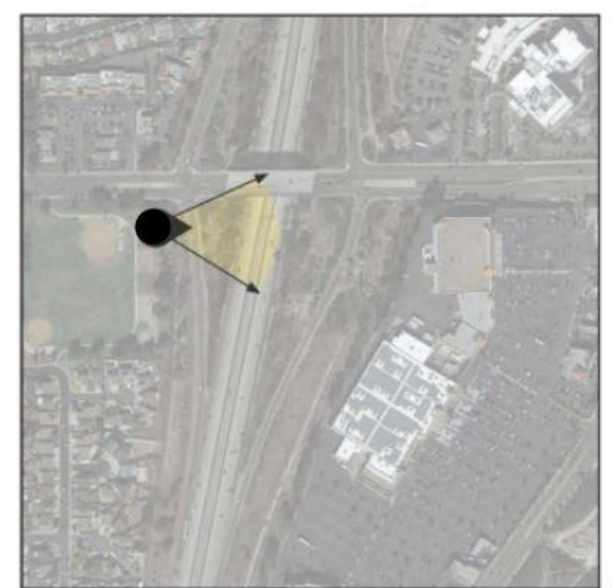




Alternate 1 + IV view looking East from Palm Ridge Park



Alternate 2 + IV view looking East from Palm Ridge Park



Keyview Photograph Location

Existing Condition view looking East from Palm Ridge Park

Figure 2.1.18  
Simulation #3 – Key Views Looking East from Palm Ridge Park





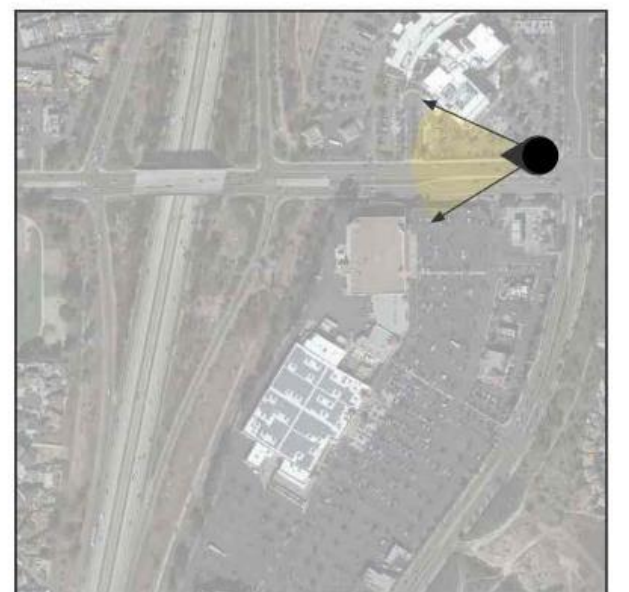
Alternate 1 + IV view looking west on Palm Avenue Westbound



Alternate 2 + IV view looking west on Palm Avenue Westbound



Existing Condition view looking west on Palm Avenue Westbound



Keyview Photograph Location



Figure 2.1.19  
Simulation #4 – Key Views Looking West on Palm Avenue Westbound





Alternate 1 + IV view looking North on Interstate 805 Northbound



Alternate 2 + IV view looking North on Interstate 805 Northbound



Existing Condition view looking North on Interstate 805 Northbound



Keyview Photograph Location

Figure 2.1.20

Simulation #5 – Key Views Looking North on Interstate 805 Northbound





Alternate 1 + IV view looking West on Palm Avenue Westbound



Alternate 2 + IV view looking West on Palm Avenue Westbound



Existing Condition view looking West on Palm Avenue Westbound



Keyview Photograph Location



Figure 2.1.21  
Simulation #6 – Key Views Looking West on Palm Avenue Westbound





Alternate 1 + IV view looking Southeast on Palm Avenue Westbound



Alternate 2 + IV view looking Southeast on Palm Avenue Westbound



Existing Condition view looking Southeast on Palm Avenue Westbound



Keyview Photograph Location



Figure 2.1.22

Simulation #7 – Key Views Looking Southeast on Palm Avenue Westbound

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## **Viewers**

Neighbors (people with views of the road) and roadway users (people with views from the road) will be affected by the proposed Project. Viewers include freeway drivers, arterial drivers, recreational users, retail workers or customers, pedestrians, cyclists, residents, and transit users.

Viewer sensitivity is a measure of the viewer's recognition of a specific object. It has three attributes: activity, awareness, and local values. Activity relates to the preoccupation of viewers—are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are observing their surroundings, the more sensitivity viewers will have of changes to visual resources. Awareness relates to the focus of view—the focus is wide and the view general or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change. Local values and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, it is likely that viewers will be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

## **Environmental Consequences**

### ***Impacts to Key Views***

- Simulation 1 (**Figure 2.1.16**) looks north on I-805 within the freeway corridor; viewers include freeway drivers; Alternative 1 + IV has moderate visual impact; Alternative 2 + IV has moderate-low visual impact;
- Simulation 2 (**Figure 2.1.17**) looks southwest on Palm Avenue towards Palm Ridge Park; viewers include pedestrians or cyclists; Alternative 1 + IV has moderate visual impact; Alternative 2 + IV has moderate visual impact;
- Simulation 3 (**Figure 2.1.18**) looks east from Palm Ridge Park; viewers include recreational users in park; Alternative 1 + IV has moderate-low visual impact; Alternative 2 + IV has moderate-low visual impact;
- Simulation 4 (**Figure 2.1.19**) looks west near the intersection of Palm Avenue and Dennery Road; viewers: Transit users; Alternative 1 + IV has low visual impact; Alternative 2 + IV has moderate-low visual impact;
- Simulation 5 (**Figure 2.1.20**) is the view from the freeway looking NB just before crossing under the Palm Avenue bridge; viewers include drivers on the freeway; Alternative 1 + IV has moderate visual impact; Alternative 2 + IV has moderate-low visual impact;
- Simulation 6 (**Figure 2.1.21**) looks west on Palm Avenue; viewers include local drivers, cyclists or pedestrians; Alternative 1 + IV has moderate visual impact; Alternative 2 + IV has moderate visual impact; and
- Simulation 7 (**Figure 2.1.22**) looks west from the commercial development across Palm Avenue from the Palm Ridge Park; viewers include retail and commercial workers and customers; Alternative 1 + IV has moderate-low visual impact; Alternative 2 + IV has moderate-low visual impact.

## ***Viewer Response***

Viewer exposure is a measure of the viewer's ability to see an object. Viewer exposure has three attributes: location, quantity, and duration. Location relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure. Quantity refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers. Duration refers to how long a viewer can keep an object in view. The longer an object can be kept in view, the better the exposure will be. High viewer exposure helps predict that viewers will have a response to a visual change. Viewer response is a result of the combination of viewer sensitivity and viewer exposure. The levels to characterize view response include low, moderate-low, moderate, moderate-high, and high.

Roadway users, including freeway drivers, arterial drivers, and cyclists, will likely have a moderate viewer response to the proposed Project because of the high quantity of viewers, their awareness, and the position in which they are viewing the proposed Project. Neighbors, including residents and pedestrians, will likely have a moderate/moderate-high viewer response to the proposed Project due to their location and duration of views. The remaining viewers, including transit users, recreational users, retail workers and customers, would have a moderate-low response. This group's views will be lower in duration and they would have less awareness or focus on the proposed Project. It is anticipated that the average response of all the viewer groups will be moderate.

## ***Visual Character***

The existing visual character of the I-805 freeway corridor at Palm Avenue is mostly contiguous with large eucalyptus trees dominating the edges of the freeway. The view is dominated by the existing bridge at Palm Avenue which is a silhouette against the sky. The bridge has decorative metal arches that frame the chain link fencing on top of the barrier rail. The freeway itself forms a strong edge which is a different texture against the trees and ground planting. The colors of the freeway and plant material are dark earthy browns and olive-green hues with little to no contrasting reflective light off buildings.

Traveling along the freeway, a visual change occurs between the on-ramps and off-ramps as the planting on the ground plane is reduced to almost nothing and the line that was created by the freeway against the vegetation is lost.

Within the proposed Project limits, the existing visual character of Palm Avenue is dominated by commercial development and retail centers that are buffered from the road with the soft green texture of the landscape including large mature trees, smaller shrubs and groundcover. This is a sharp contrast in texture and color to the existing bridge as it crosses over the freeway. In addition to the landscape buffer, Palm Ridge Park, located on the southwest corner of the proposed Project limits also provides a soft green texture and color and provides continuity through the proposed Project on the western side. The proposed Project changes to the freeway corridor will be mostly compatible with the existing visual character.

Freeway corridor views to the bridge would be very similar to existing conditions because the fence railing, exterior girder and new columns would be compatible with the existing bridge design. New slope paving would be colored and textured to blend with adjacent soils. The visual character at night would change due to the addition of pedestrian scale lighting at the bridge. Grading is required throughout the proposed Project, thereby the tree loss will modify the soft texture of the visual character along the freeway. However, trees would be replanted or protected in place to help maintain the form and textural pattern of the existing freeway planting.



The introduction of retaining walls would change the visual character at the freeway I-805/Palm Avenue Interchange. Alternative 1 + IV would construct new retaining walls at the off-ramp near the Palm Promenade Shopping Center and at the NB loop-ramp. The off-ramp wall would be approximately 530 feet long and 37 feet high. The loop-ramp wall would be about 410 feet long and 48 feet high. To reduce the impacts to the visual character, the walls incorporate a curvilinear alignment and architectural treatment to reduce the apparent overall scale. The terrain contoured walls are designed to curve back into the slope to match the shape and form of the existing hillside. The wall surface would be textured and planted with vines to soften the appearance and to reduce the visual dominance of the walls. The walls would be given an earth-tone color to blend with surrounding soils and provide a coloration like other retaining walls found along the interstate corridor nearby.

Alternative 2 + IV would have less impact on freeway views than Alternative 1 + IV because this alternative will not construct a new loop ramp or retaining walls. The on-ramps and off-ramps would be realigned but again, the dominance, texture, form, line and continuity would be very similar to the current conditions and little to no change will be visible. This alternative would construct the same features at the bridge as Alternative 1 + IV, except that slope paving would be at both abutments. Where grading impacts landscaping, new trees and landscaping would help maintain the form and textural pattern of the existing freeway planting.

The proposed Project changes to the Palm Avenue streetscape would alter the existing visual character of the site. Each alternative would widen Palm Avenue to accommodate additional lanes, Separated Bikeways, and widened sidewalks. The wider road and bridge width would be notable and would change the spatial experience for the traveler along Palm Avenue.

Alternative 1 + IV would widen the Palm Avenue Bridge to be about 1.5 times wider (94 feet to 138 feet). Alternative 2 + IV would construct the bridge to be 1.6 times wider (149 feet wide). However, the visual character of the bridge would remain unchanged because the decorative architectural fence railing would be reused. New pedestrian lighting and wider sidewalks would provide a pedestrian realm to compensate for the additional roadway surface. The center median on both sides of the bridge would be reconstructed to include a refuge area for pedestrian crossings. The medians would be paved with tan, integrally colored concrete to contrast with the curb. The new Separated Bikeway at Palm Avenue will be separated from street traffic by flexible posts.

The visual character of the Palm Avenue streetscape would be altered to accommodate the Palm Avenue widening. The replacement of the existing landscaped buffer with proposed retaining walls would result in urban features that would visually dominate the area. Alternative 1 + IV would construct a retaining wall between the Palm Ridge Park and City sidewalk. (About 300 feet long x 4-10 feet high). Alternative 2 + IV proposes a slightly larger wall (approximately 330 feet long x 4-18 feet high), but vines and the wall texture and tan color will help to reduce the visual impact and maintain an architectural theme along Palm Avenue. Alternative 2 + IV would also replace the existing crib wall along the south side of Palm Avenue to accommodate the realignment of the road. The wall treatment will include tan color, texture, and pilasters, as well as vines, street trees and shrubs in front of the wall to reduce the dominance of the wall. Low profile walls next to the sidewalk will also be needed (approximately 120 feet long x 1.5 feet high and 140 feet long x 2.5 feet high). The low walls would be tan colored concrete with no texture. Alternative 2 + IV would result in a greater change to streetscape views because this alternative would construct a wider street, a longer and taller park wall, and replace the crib wall.



### ***Visual Quality***

The visual quality of the existing freeway corridor will be minimally altered by the proposed Project. As a freeway driver is traveling either NB or SB, the existing bridge at Palm Avenue provides a distinctive feature along the I-805 corridor and provides a memorable feature that will remain unaltered with the proposed Project under both Build Alternatives. The unity of the landscape will remain intact once the new plantings are established and have had an opportunity to grow in along the freeway under both Build Alternatives. The planting at the intersections of the on- and off-ramps and Palm Avenue are designed to be distinctive with the proposed palm trees and will help to identify the intersection. All the proposed architectural features such as the bridge, columns, fencing, walls, and slope paving are designed with colors and textures that provide a consistent visual element throughout the I-805 corridor. It will take time for the proposed Project to become as intact as the current conditions due to the loss of mature, tall vegetation and the time frame in which the plants will take to re-establish and fill the slopes.

### ***Visual Impact***

The visual impacts of proposed Project alternatives are determined by assessing changes to the visual resources caused by the proposed Project and predicting viewer response to those changes. The visual quality and character of the existing study area will change but will not be negatively altered by the proposed Project with the inclusion of visual impact avoidance measures. The proposed Project changes will only result in a moderately low to low contrast to the bridge. The proposed widening of the bridge will have the same aesthetic features as the existing bridge including the railing which will not alter the visual character or quality of the bridge feature. The texture and color of the proposed bridge improvements are designed to match the existing walls and slope paving within the corridor. The design of the widened bridge maintains the very distinctive form that continues to increase the vividness of the view and the visual character of the site. The bridge platform fencing provides a simple arch, or curvilinear form, that is both compatible with the current forms found in the I-805 corridor, while at the same time creates subtle softening of what could be considered harsher forms of roadway below and other existing bridges in the area. The bridge treatment is the same in both Build Alternatives.

The Palm Avenue widening would change the spatial experience for the traveler along Palm Avenue because the bridge would be about 1.5 times wider. However, the visual character of the bridge would remain unchanged because the decorative architectural fence railing would be reused. New pedestrian lighting and wider sidewalks would provide a pedestrian realm to compensate for the additional roadway surface. The center median on both sides of the bridge would be reconstructed to create a refuge area for pedestrian crossings. The medians should be paved with tan colored concrete. The new Separated Bikeway would be separated from vehicular traffic by flexible posts at the street.

The proposed Project proposes considerable grading and new retaining walls within the corridor. While these walls are somewhat large in scale, the walls incorporate a curvilinear alignment/profile and architectural treatment to reduce the apparent overall scale. Where space allows, terrain contoured walls are designed to curve back into the slope to match the shape and form of the existing hillside. The proposed walls are broken up with pilasters to visually reduce the length of the walls. In addition, all the walls are colored and textured and have planting and vines at the base to visually reduce the height. The safety railing on top of the walls is an earthy tone to blend into the existing landscape. Alternative 2 + IV proposes to replace the existing crib wall at Palm Avenue. The wall treatment will include color, texture, and pilasters, as well as vines, street trees and shrubs in front of the wall to reduce the dominance of the wall.

The proposed Project proposes to construct a retaining wall at Palm Ridge Park that will block high quality views to the park. To reduce these impacts, the top of wall has a smooth profile to blend with the park topography. The wall is colored tan and set back from the sidewalk to allow room for architectural features and vine planting. The safety railing at the top of wall will be a dark color to minimize contrast with the park vegetation. Mature pine trees will be removed by the wall construction. New tree planting within the park will provide continuity with the existing park features.

The grading and retaining walls will result in a loss of vegetation throughout the proposed Project. Tree resources occur on the slopes and at the intersections of the on- and off-ramps within the proposed Project and a substantial number of trees will be required to be removed. Both Build Alternatives would result in the loss of approximately 13 trees on the park slope adjacent to Palm Avenue at Palm Ridge Neighborhood Park. These trees have generously sized canopies and are dominant within the viewing environment. With the removal of the trees, the softness and green tones of the corridor are reduced. The trees and vegetation that are removed would be considered a loss of visual resources. The proposed planting plans will help to restore these visual resource losses and offset these adverse changes. The palm trees proposed with the proposed Project are a feature that will increase the visual quality and will result in a positive improvement to the existing scene. In addition to the vegetation loss in the freeway corridor, the existing park will also lose trees because of the widening of the road and a new wall in both Build Alternatives. New trees and planting are proposed in the park to replace the existing trees and minimize the visual impact.

Alternative 1 + IV would have more impact on freeway views than Alternative 2 + IV because this alternative would construct a new loop ramp and retaining walls. Alternative 2 + IV would have more impact to streetscape views at Palm Avenue than Alternative 1 + IV because this alternative would construct a wider street, slightly larger wall at the park, and replace the crib wall. The size and number of new walls that are required in Alternative 1 + IV is more substantial than Alternative 2 + IV; therefore, Alternative 1 + IV would have a bigger impact.

For both Build Alternatives, a significant number of viewers are able to see the elements of the proposed Project from the freeway, but the duration in which they view the proposed Project is relatively short. For most viewers, the proposed Project is only in foreground views for a brief moment. In general, the vehicular viewers at the freeway and Palm Avenue are not focused on the view and are moving through the area at rapid rates of speed. The duration of how long the proposed Project is in their viewing scene is short. The vehicular viewer's response to change will be moderate. Neighbors, pedestrians and cyclists are traveling at slower speeds and are more focused on the area. This user group, although small in number, will have a moderate to moderate-high viewer response. Overall, the viewer's response to change will be moderate to moderate-low.

Within the freeway corridor, the combination of the viewer response and the change to visual resources will result in an overall moderate visual impact for Alternative 1 + IV and a moderate-low visual impact for Alternative 2 + IV. At Palm Avenue, the visual impact would be moderate-low for Alternative 1 + IV and moderate for Alternative 2 + IV, with certain views and aspects of the proposed Project being considered as positive aesthetic improvements.

### ***Temporary Construction Impacts***

The visual character of the proposed Project area will temporarily be impacted during construction through the existence of construction equipment. The removal of eucalyptus trees in both Build Alternatives would alter visual quality. Until the proposed planting would reach maturity, the enclosing visual effect of these trees would be eliminated creating a much more open feeling with broader views of the sky and surroundings for drivers on I-805.

### **Avoidance, Minimization, and/or Mitigation Measures**

Avoidance or minimization measures have been identified and can lessen visual impacts caused by the proposed Project. The inclusion of aesthetic features in the proposed Project design previously discussed can help generate public acceptance of a project. This section describes additional avoidance and/or minimization measures to address specific visual impacts. These will be designed and implemented with concurrence of the Caltrans Landscape Architect.

To reduce visual impacts, the design shall implement the following measures where feasible to blend proposed new Project features with the existing context;

#### Architectural Treatments

*Bridge Aesthetics* – New bridge features, such as support columns, infill walls, and bridge railing shall be similar to or compatible with the visual character of the existing bridge. The existing decorative tubular arches that frame the chain link fences on top of the barrier rails shall be salvaged and reinstalled on new barrier rails with new gray vinyl, chain link fencing. Cast-in-place concrete columns shall match existing color, finish, and column geometry. The infill wall and bridge barrier shall have an architectural texture.

*Bridge Slope Paving* – Slope paving shall have deeply textured facing materials such as tan, 5-groove, split face pavers to deter graffiti.

*Cable Railing* – All galvanized surfaces shall be stained a dark brown color with “Natina Steel.”

*Worker Safety Paving Beyond the Gore* – Landscape Areas beyond the gore shall be paved with a contrasting surface. The minimum width of landscape area next to this paving shall be 30 feet. Paving shall be integrally colored tan concrete with an exposed aggregate finish. Concrete color must be Davis “Mesa Buff,” Scofield “Schooner Beige” or Solomon “Ginger.”

*Worker Safety Paving* – Unprotected, narrow landscape areas in the freeway setting shall be paved with integrally colored tan concrete with an exposed aggregate finish.

#### Retaining Walls

The proposed walls on the proposed Project would utilize form liners and colors that are already existing within the I-805 corridor. The wall treatments will match the existing character of the corridor and will also include horizontal treatments to reduce the impact of the dominance and scale of the proposed walls. The same wall treatments are applied to both Build Alternatives.

*Alignment* – Walls facing the freeway and Palm Avenue shall be setback from travelers as much as possible to allow room for planting buffers and minimize the visual prominence of each wall.

*Layout* – Walls shall possess a natural, organic character by following the contours of natural topography. The layout shall consist of long radius curves, and the use of tangent sections (straight lines) shall be avoided if possible.

*Profile* – Since the wall layout shall ideally follow a single topographic contour, the top of the wall shall remain at that elevation and be essentially level. Wall height variations shall become apparent at the bottom of the wall. When wall layouts must vary from adjacent contours, top of wall profiles should be kept at less than 10 percent if possible. The top of wall profile shall consist of long radius curves and use of tangent sections shall be avoided.

Retaining walls shall have a formliner texture compatible with walls in the I-805 Corridor. Architectural design elements such as pilasters and wall caps shall be used to reduce visual impacts associated with walls. Retaining walls at Palm Avenue shall be integrally colored Davis Color “Mesa Buff” to be consistent with community street walls at the Palomar overcrossings in the I-805 corridor.

### Grading and Drainage

*Manufactured Slopes* – Cut and Fill slopes shall be graded 1:2 (v:h) or flatter. Steeper cut slopes may be possible if they are stepped. Grading shall use slope rounding to approximate the appearance of natural topography.

*Cultivation* – Contractor use areas shall be cultivated to a depth of 12 inches to loosen compacted soils prior to planting.

*Drainage Features* – Exposed surfaces of drainage devices (ditches, aprons, headwalls), vegetation control, rock slope protection and slope protection shall be colored tan.

*Erosion Control Materials* – All temporary erosion control materials such as fiber rolls, netting, rope, must be biodegradable.

*Landscape Replacement* – Both Build Alternatives will require re-landscaping of areas affected by the proposed bridge widening and ramp improvements. The affected area is expected to include the entire I-805/Palm Avenue Interchange from 0.3 mile south to 0.3 mile north of the Palm Avenue overcrossing and from I-805 to the State Right-of-Way. Either of the Build Alternatives may involve phasing of construction. Landscape replacement and irrigation repair will occur with all phases.

### City and Park Landscaping

All areas disturbed by the proposed Project within the City right-of way shall be replanted and include automatic (temporary or permanent) irrigation systems.

*Planting* – All planting and street trees shall be replaced per the City of San Diego Municipal Code. New street trees are required mitigation in front of the wall that replaces the crib wall. Root barrier shall be installed adjacent to sidewalks as required. Non-invasive plants that are appropriate for the Southern California climate and or native or drought tolerant shall be used.

*Irrigation* – All irrigation systems within the City Right-of-Way and including the park will need to be retrofitted to accommodate the features of the proposed Project.

*Existing Trees* – All existing trees to remain shall be protected in place with temporary construction fencing around the root zone. All trimming of the roots or the canopy shall be monitored and based upon a report from a certified arborist.

*Planting Maintenance Period* – All plantings shall be installed and approved prior to the start of the plant establishment period (PEP). All permanently irrigated plants and sod installations at the park shall include a 90-day PEP and seed or stolonized turf areas will include a 120-day PEP. All unhealthy plant material shall be replaced, and the PEP extended if plantings are not properly maintained. All other plantings in City Right-of-Way (in front of the crib wall) will include a one-year plant establishment with the roadway construction contract.

The affected property owner(s) will maintain the plantings and irrigation once the one-year plant establishment period has expired. Once the acceptance of the PEP is completed for temporarily irrigated native plantings, a 25-month revegetation maintenance and monitoring period shall begin.

### Freeway Planting

The color, texture, and diversity of the visual character of the proposed planting work to create a unified and intact visual quality. The palm trees located at the on- and off-ramp intersections of Palm Avenue create a vivid quality that is unique to this intersection and distinctively identifies the area. The plant groupings are used to reduce the perceived height and scale of the walls. The same planting concept is applied to both Build Alternatives. The proposed planting for the corridor is focused on continuing the visual character of the I-805 corridor with larger evergreen trees moving away from the intersection of Palm Avenue while increasing the visual quality and reinforcing the importance of the intersection with stands of palms at the on- and off-ramps. A minimum size of 15-gallon trees is being proposed within the corridor along with 15- and 5-gallon shrub material to reduce the potential impact of the proposed Project and the removal of existing trees. New palms to be minimum 36-inch box size. The proposed plant material palette includes several native species.

*Highway Replacement Plantings and Revegetation* – The proposed Project shall revegetate all disturbed landscaped and naturalized vegetation areas with irrigated container plants followed by hydroseeding or groundcover plantings. Southern California native, or drought tolerant, non-invasive plants shall be used. Trees will be provided in equal (or greater) quantity to the number of trees removed to construct the proposed Project.

*Landscape Protection Areas* – Planting and vegetated areas outside the construction footprint shall be designated Landscape Protection Areas (LPA) and protected by temporary fencing prior to clearing and grubbing. No equipment, material storage, vehicles or access paths are allowed within LPAs. Limited access to LPAs is allowed for irrigation check and test, irrigation removal, and irrigation work.

All existing trees to remain shall be protected in place with temporary fencing around the root zone at the canopy limits. A certified arborist shall evaluate existing trees within the proposed Project limits to determine if they should be pruned or removed for safety. All root or canopy trimming shall be monitored by a certified arborist. All dead trees and palms shall be removed by the proposed Project.

*Vines* – Walls shall be planted with Boston Ivy to discourage graffiti where reasonable and feasible with consideration of maintenance access and safety.

*Weed Germination* – After irrigation systems are installed, weeds shall be germinated and killed prior to planting.

### Freeway Irrigation

Irrigation must be installed at all new planting areas to establish the proposed planting. The existing planting is currently being watered with potable water supply. Two 2-inch water meters are available at Palm Ave west of the “P-4” Line SB off-ramp (4398 Palm Avenue, Acct # 19-03636-21-3). The meters will need to be relocated to accommodate the Palm Avenue widening. Recycled water is anticipated for the future. All existing irrigation controllers and systems will be impacted by bridge widening. All existing irrigation systems will be upgraded to a Remote Irrigation Control System (RICS) utilizing the latest Calsense equipment (controllers and other components) to reduce flows and increase delivery efficiency. The proposed Project would replace deteriorated existing water supply lines, valves, and systems.



*New Freeway Irrigation Systems* – All irrigation systems shall be automatic and below grade. Irrigation systems impacted by construction shall be repaired or replaced. Each tree and vine shall be permanently irrigated by a bubbler system on a dedicated valve with one below-grade bubbler per vine and two per tree. All other plantings shall be irrigated with a rotor system. New irrigation systems are required for bubbler systems, slope revegetation and restoration areas. Irrigation systems shall include specialized RICS (Calsense 3000) equipment and be designed for use with recycled water. Specialized District 11 Landscape details must be used.

*Existing Freeway Irrigation Systems* – Avoid impacts to existing irrigation systems where possible. Check and test existing irrigation systems prior to proposed construction activities. Provide necessary measures to maintain a constant water supply to existing systems to remain outside of work and contractor use areas prior to clearing and grubbing. Repair or replace impacted irrigation components. This includes valve manifolds, control wire, mainline pipe, lateral sprinkler pipe and sprinkler heads. Repair or replace irrigation mainlines and control wire that service areas outside the construction footprint.

*Irrigation Crossovers* – Contract Layout Plans shall identify City and freeway crossover locations within the vicinity of work areas and contractor use areas. Irrigation crossovers shall be extended or replaced where construction work impacts them.

*Maintain Water Supply to Existing Systems* – Prior to construction, the proposed Project shall perform necessary measures to maintain water supply to existing city and freeway systems beyond the construction footprint such as temporary highlining, new water meters, extending existing crossovers and new crossovers.

*Bridge Supply Line* – The proposed Project shall provide a 4-inch concrete-lined Ductile Iron Pipe (DIP) supply line in the southern widening for irrigation water. The 4-inch supply line will allow for the irrigation system to be converted to recycled water when recycled water becomes available.

### Freeway Plant Establishment

A plant establishment period will be critical to the survival and health of all the plant material that is proposed with the new proposed Project.

*Plant Establishment* – Type 2 Plant Establishment shall be included with each Roadway Construction project for a period of one year (250 working days), followed by extended plant establishment under a separate contract.

*Extended Plant Establishment* – The permittee shall provide additional plant establishment by a separate contract for a period of four years (1000 working days) at the end of each Roadway Construction project. Plant Establishment shall include weeding, watering and replacement plantings as required.

With the implementation of the minimization measures discussed earlier in the document, the proposed Project features would have only a low to moderate impact on the existing quality and character of the existing I-805/Palm Avenue Interchange. Viewers will not notice the visual difference once construction is complete because the bridge expansion simply builds on the existing bridge and duplicates its aesthetic. The widening of the bridge will improve the current circulation patterns for pedestrians, cyclists, and potentially mass-transit users by creating expanded travel lanes, walkways, and setting aside an area for a future bus stop. The forms, textures, and colors chosen for both the hardscape and plant palette blend with the muted earth tones and rough textures already present on the site and throughout the I-805 corridor. The larger elements of the proposed improvements, the retaining walls and the removal of the existing eucalyptus stands, would be effectively mitigated by the minimization measures

described. The walls would be screened with vine planting and given a more human-scale with the application of a form liner texture, wall-cap, and decorative pilasters where appropriate. The removal of the eucalyptus trees (non-native species) would be mitigated by the planting of new trees, shrubs, and groundcover throughout all disturbed planted areas. This new planting would provide a much-needed face-lift to the existing planted areas which have gone without extensive maintenance or plant replacement for many years.

For all the reasons mentioned above, the visual impacts of the proposed I-805/Palm Avenue Interchange improvements Project on existing landscape quality and character in the study area are expected to be moderate-low to moderate, assuming the implementation of the minimization measures discussed. Within the freeway corridor, the visual impact would be moderate for Alternative 1 + IV and moderate-low for Alternative 2 + IV. At Palm Avenue, the visual impact would be moderate-low for Alternative 1 + IV and moderate for Alternative 2 + IV, with certain views and aspects of the proposed Project being considered as positive aesthetic improvements. The size and number of new walls that are required by Alternative 1 + IV is more substantial than Alternative 2 + IV, therefore Alternative 1 + IV would have a bigger project impact. Retaining walls are pictured in **Figure 2.1.16** through **Figure 2.1.22**. Without the minimization measures the visual impact of the proposed Project would be moderate to moderate-high.

## **2.2 PHYSICAL ENVIRONMENT**

### **2.2.1 Hydrology and Floodplain**

#### **Regulatory Setting**

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

To comply, the following must be analyzed:

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

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

#### **Affected Environment**

This section is based on information provided in the "I-805/Palm Avenue Interchange Project Post Mile 2.899 Drainage Report" dated January 6, 2016.

The proposed Project area generally slopes from south to north draining into the Otay River and eventually into the southern San Diego Bay. The watershed tributary to the proposed Project includes portions of hillsides to the east and west of I-805. It is bounded by the Otay River to the north and Del Sol Boulevard to the south. Offsite drainage subbasins within the watershed and

onsite limits of work are depicted in **Figure 2.2.1**. The majority of the watershed is currently developed and includes Kaiser Permanente Medical Offices, commercial centers, and residences. The portion of the watershed with open space is located to the southeast of the proposed Project area. The onsite drainage areas consist of the tributary areas within the Caltrans Right-of-Way and adjacent hillsides that drain directly to ditches and channels connecting to the I-805 drainage system.

The nearest defined floodplain is for the Otay River, located north of the proposed northernmost Project limits. The Flood Insurance Rate Map (FIRM) produced for the National Flood Insurance Program (NFIP) shows the Otay River in the proposed Project vicinity on Panel 2158 of 2375 (**Figure 2.2.2**). The FIRM shows the boundaries of the special flood hazard areas subject to inundation by the base flood (100-year flood). Base flood elevations have been determined and the floodway has been mapped in this part of the Otay River. The floodway is the area that must be kept free of encroachment so that the one percent annual chance flood (100-year flood) can be carried without substantial increases in flood heights.

The existing drainage system collects offsite flows from adjacent commercial developments, hillsides, and residential neighborhoods as well as flows from the Interstate and Palm Avenue. Runoff from the I-805/Palm Avenue Interchange drains to a trunk storm drain system within the Right-of-Way for I-805. The trunk storm drain system conveys runoff through the proposed Project site and outfalls into the Otay River north of the proposed Project limits. The existing drainage subbasins and major piping elements are shown on **Figure 2.2.1**. The total offsite area is 174 acres. The existing network has 31 inlets in the form of catch basins to collect storm water.

## **Environmental Consequences**

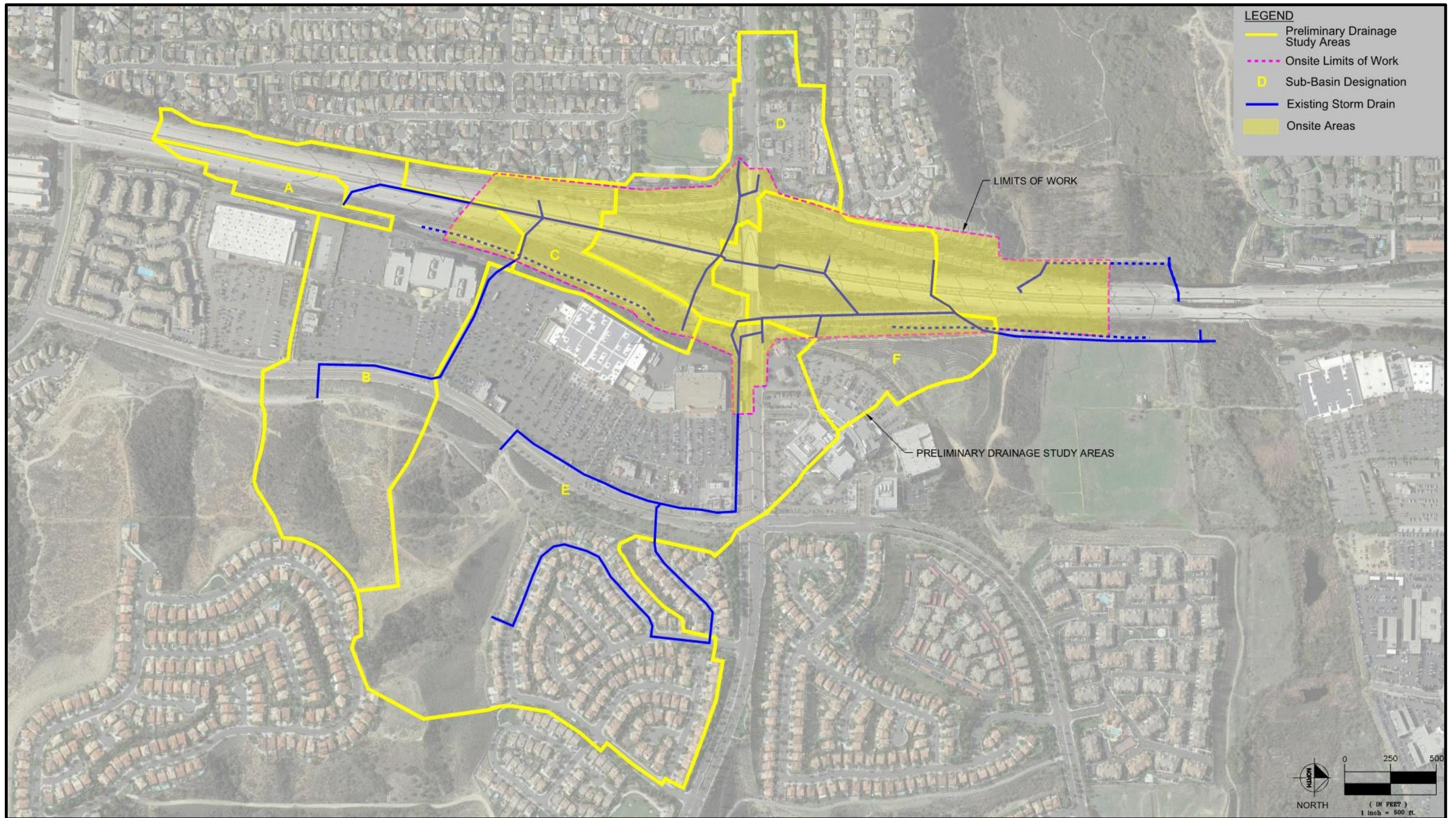
The limits of work for the proposed Project terminate south of the Otay River special flood hazard areas subject to inundation by the 100-year flood as depicted on **Figure 2.2.2**. Therefore, the proposed Project would not encroach on the boundaries of the 100-year flood and the existing Federal Emergency Management Agency (FEMA) floodplain would not be impacted.

The Drainage Report (2016) analyzed the effects of the 100-year flood event upon existing conditions considering all offsite runoff as defined in the 2009 Preliminary Hydraulic Review in Appendix A of the Drainage Report. The Preliminary Hydraulic Review analyzed the effect of existing offsite and onsite conditions and the impacts to the existing storm water infrastructure. Based on this level of analysis, the existing storm drain system has been determined to be adequate to convey storm water runoff during the 100-year event under existing conditions. For example, the capacity of the 78-inch-diameter storm drain where it outfalls to the Otay River is estimated to be approximately 620 cubic feet per second (cfs), and the 100-year flow is estimated to be approximately 600 cfs.

New impervious area created by the proposed Project would generate runoff that would drain to local inlets and be conveyed downstream relatively quickly compared to the longer duration offsite flows that have been calculated for the trunk storm drain system. It is anticipated this increase in flow rate would not coincide with the peak flows from the larger offsite flows. Based on preliminary calculations and review, the increase in runoff would be less than 1 cfs. Therefore, the storm drain facilities are adequately sized, and it is anticipated that the proposed Project would not impact the existing storm drain facilities such that upsizing would be required to prevent flooding. More detailed analysis will be conducted during final design of the selected alternative using a network analysis. The total onsite area encompasses approximately 50.5 acres for the onsite condition in the case of both Build Alternatives.

Most of the existing storm drains would continue to be used in all proposed Build Alternatives. Some existing storm drains would be moved due to the change in road alignment. Two to five additional inlets would be required due to the change in road alignment. A bioretention BMP facility is proposed within the Caltrans Right-of-Way in order to provide treatment for the increased impervious areas created by proposed Project improvements. The bioretention BMP facility would also serve to detain the increase in storm water runoff generated by the increased impervious surfaces of either Build Alternative for the proposed Project. These measures incorporated into the proposed Project would avoid impacts to the existing drainage basins encompassing the proposed Project area.





**Figure 2.2.1**  
**Drainage and Storm Drain System in the Proposed Project Area**



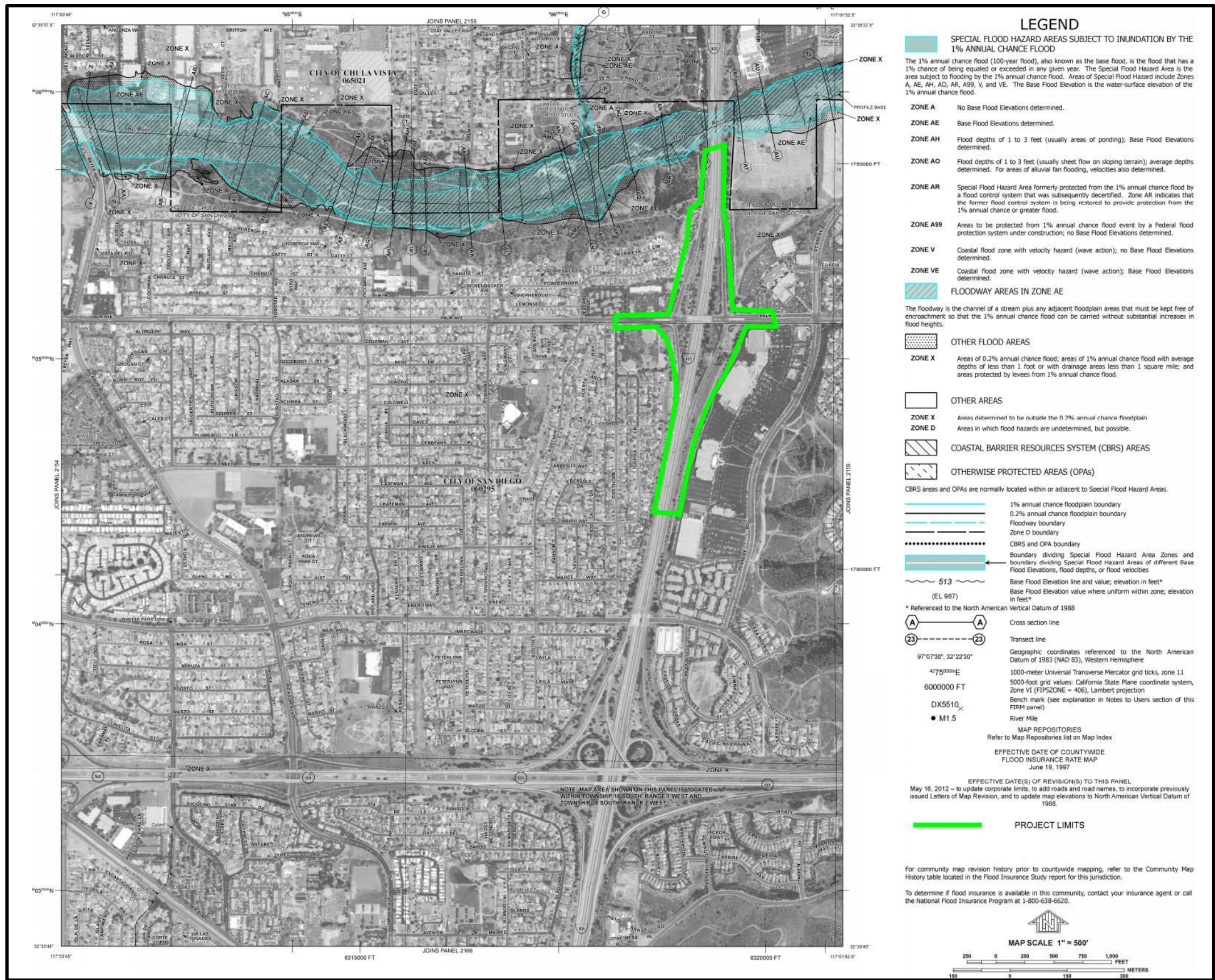


Figure 2.2.2

Flood Insurance Rate Map of the Proposed Project Area



### **Cumulative Impacts**

Neither Build Alternative would cause hydrology or floodplains to degrade because the proposed Project would include a bioretention BMP facility that would detain increased runoff, and the proposed Project would not extend to the boundaries of the Otay River 100-year floodplain. Therefore, cumulative impacts are not anticipated for hydrology and floodplain resources.

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts to hydrology or floodplains would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

Impacts to the FEMA floodplain of the Otay River would be avoided because the proposed Project would not extend to the boundaries of the 100-year floodplain. Impacts to the existing drainage basins encompassing the proposed Project area would be avoided by incorporation of a bioretention BMP facility that would detain increased runoff generated by the proposed Project. No additional minimization or mitigation measures would be needed.

## **2.2.2 Water Quality and Storm Water Runoff**

### **Regulatory Setting**

#### ***Federal Requirements: Clean Water Act***

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

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

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<sup>1</sup> A point source is any discrete conveyance such as a pipe or a man-made ditch.

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent<sup>2</sup> standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. No jurisdictional waters exist within the Project footprint.

### **State Requirements: Porter-Cologne Water Quality Control Act**

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The SWRCB and Regional Water Quality Control Boards (RWQCBs) are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In

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<sup>2</sup> The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

### **State Water Resources Control Board and Regional Water Quality Control Boards**

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

### **National Pollutant Discharge Elimination System Program**

#### Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water." The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans's MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

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

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

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research,

program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

### Construction General Permit

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

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

### Section 401 Permitting

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

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



## **Affected Environment**

This section is based on information provided in the "I-805/Palm Avenue Interchange Project Post Mile 2.899 Drainage Report" dated January 6, 2016 and the "Long-Form Stormwater Data Report" (SWDR) dated July 19, 2017.

The proposed Project is located within the San Diego Basin in RWQCB Region 9, within the Otay Hydrologic Unit, Otay Valley Hydrologic Area, and Hydrologic sub-area 910.20.

Like the City of San Diego in general, the climate within the proposed Project vicinity is Mediterranean, with normal temperatures ranging from 58 to 71 degrees Fahrenheit. Rainfall totals approximately 11 inches per year, but it increases with higher elevations and greater distances from the coast. Approximately 85 percent of all the rainfall in the San Diego area occurs from November through March.

Land uses in the proposed Project area consist of large commercial shopping centers, general commercial, gas/service stations, and medium density residential neighborhoods that include single family homes, limited multi-family housing, and a neighborhood park. The terrain has a gradual gradient downward to the north. Slopes along I-805 are relatively steep and incline downward towards the freeway from both sides.

### ***Local Hydrology and Water Quality***

As discussed in **Section 2.1.1, *Hydrology and Floodplain***, the watersheds adjacent to the I-805/Palm Avenue Interchange drain to a trunk storm drain system within the I-805 Right-of-Way. The trunk storm drain system conveys runoff through the proposed Project site and discharges into the Otay River, located approximately 0.4 mile north of the I-805/Palm Avenue Interchange bridge. The Otay River outlets into the San Diego Bay, which has been listed on the 303(d) list as being impaired for PCBs (Polychlorinated Biphenyls). However, the proposed Project does not discharge to a water body identified on the 303(d) list for any of the Targeted Design Constituents (TDC); phosphorous, nitrogen, total copper, dissolved copper, total lead, dissolved lead, total zinc, dissolved zinc, sediments, and general metals. No special requirements or concerns have been raised, including TMDLs or effluent limits, within the proposed Project limits.

### ***Soil Characteristics and Erosion Potential***

In general, the soil within the proposed Project area is characterized as clay, clay loam, and cobbly clay loam to a depth of approximately 60 inches. Soil types in the proposed Project area include Huerhuero loam along the southern and western portions, Olivenhain cobbly loam along the center and northeastern portions, Diablo clay to the southeast, Salinas clay loam in the north, and Terrace escarpments in the northwest.

Erosion is defined as the process by which the surface of the earth is worn away by the action of forces such as water, wind, and waves. The susceptibility of an area to erosion is affected by its soil types. The proposed Project area is predominantly covered by type D soils, which are described as having high runoff potential and very slow infiltration rates. Soils with high clay content have relatively low susceptibility to erosion because their particles are resistant to detachment. Medium-textured soils, such as a silt loam, have moderate susceptibility to erosion because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. The average soil erodibility in the proposed Project area is estimated to be moderate. The overall site sediment risk, considering potential storm events, soil erodibility and topography, is medium. Existing slopes within the proposed Project area generally appear stable and have sufficient vegetation to reduce soil erosion risks.

## Environmental Consequences

### *Temporary Impacts*

Temporary impacts would occur primarily during construction and for the first four to six months of operations, before soil stability and vegetative cover have reestablished. Construction of both of the proposed Build Alternatives would involve site grading. This would expose unprotected soil to erosion by wind, rain, and runoff. During and after construction, exposed slopes could erode until stabilized by vegetative or mechanical means. A combination of sheet and concentrated flows could erode and transport the soil, causing suspended fine-grain soil particles to enter the Otay River. These suspended particles could increase turbidity, settle, and cause siltation downstream, potentially resulting in adverse effects on aquatic habitats.

### *Permanent Impacts*

Permanent impacts to existing drainage patterns are assessed in terms of total impervious surface with implementation of a project. The proposed Project would result in an increase in storm water runoff due to an increase of impervious groundcover within the proposed Project area. This would result in additional volume and velocity in the storm drain system and eventually at the pipe outlet into the Otay River. The change in runoff characteristics and volume could lead to stream bank erosion and increased scour within unlined drainage ditches. The result could be an increase in sediment and turbidity in receiving waters.

Additional impervious roadway surfaces may also contribute to water quality impairment through the collection and subsequent runoff of sediment, oil, grease, lubricants, paint, and other pollutants. Associated potential water quality impacts include increased concentrations of any of the following types of pollutants entering surface waters or groundwater: total suspended solids (TSS), nutrients (nitrogen/phosphorus), pesticides, metals, pathogens, trash, biochemical oxygen demand (BOD), and total dissolved solids (TDS). An increase in TSS may also result from increased soil erosion associated with greater storm water runoff, causing downstream siltation and water quality impairment. While suspended, these TSS particles can prevent sunlight from reaching aquatic plants and benthic, or bottom-dwelling communities, impairing respiration and reproductive habitat for aquatic organisms including fish. The increase in pollutants would be proportional to the increase in runoff flow rate and volume resulting from increased impervious (paved) surfaces. These effects would depend greatly on ground slope, soil erodibility, rainfall intensity, and vegetative ground cover.

Construction of the proposed Project would require the disturbance of existing soils. The amount of soil disturbance is represented by the DSA. The total estimated DSA and net increased impervious area for each Build Alternative are provided in **Table 2.2.1**. DSA and impervious areas were estimated using preliminary design drawings of the proposed Project Alternatives as envisioned at this time. The total proposed Project DSA would be approximately 43.55 acres for Alternative 1 + IV and 35.93 acres for Alternative 2 + IV.

The widened roadway and ramps would result in a net increase in impervious area for both Build Alternatives, as presented in **Table 2.2.1**. The net increase in impervious area would be approximately 4.66 acres for Alternative 1 + IV and 3.27 acres for Alternative 2 + IV. Both Build Alternatives would increase the impervious area by more than 1 acre and therefore would be required to consider permanent treatment BMP facilities onsite. At least 100 percent of the total net increased impervious area for the Build Alternatives would need to be treated.

**Table 2.2.1 Disturbed Soil Area and Impervious Area of the Proposed Project**

Alternative	Total Project DSA	Net Increased Impervious Area		
		Total	Within Caltrans Right-of-Way	Outside Caltrans Right-of-Way
	Acres	Acres	Acres	Acres
1 + IV	43.55	4.66	4.39	0.27
2 + IV	35.93	3.27	2.87	0.40

Source: SWDR 2017

Water Quality flow rates have been estimated for each Build Alternative based on their total tributary area acreages and are presented in **Table 2.2.2**. The proposed post construction treatment area exceeds the net increased impervious area both Build Alternatives, so the requirement to treat at least 100 percent of the total net increased impervious area is satisfied.

**Table 2.2.2 Water Quality Flow Rates**

Alternative	Impervious Tributary Area	Pervious Tributary Area	Post Construction Treatment Area	Runoff Coefficient	Water Quality Flow Rate
	Acres	Acres	Acres		(cfs)
1 + IV	6.69	0.78	7.47	1.90	1.39
2 + IV	6.31	0.73	7.04	1.90	1.32

Source: SWDR 2017  
cfs = cubic feet per second

Runoff along Palm Avenue and I-805 ramps would be collected in the existing drainage system facilities. Based on the estimates of potential increased runoff, flow increases would be relatively minor, less than 1 cfs. The majority of the storm drain facilities in the proposed Project area are underground and would not be modified. Hardened channels and storm drain outfalls are in place today and most likely will not need to be upsized.

MS4s within the proposed Project limits include the Caltrans MS4 and City of San Diego MS4. Work within the City of San Diego’s jurisdiction will be required to comply with the City’s MS4 permit requirements.

The existing site conditions contain very steep slopes at approximately 1.5:1. The proposed Project proposes to maintain as much of the existing slopes and embankments in their current state unless flatter slopes are feasible. At this time, the majority of the slopes proposed are 2:1 or flatter with rounded, shaped and stepped slopes to reduce concentrated flows and promote vegetation establishment to reduce erosion potential. Slopes will be reviewed in more detail to determine if 3:1 or flatter slopes are feasible during later design phases of the proposed Project.

No drinking water reservoirs and/or recharge facilities lie within the proposed Project limits. The proposed Project is not anticipated to need a 401 certification from the RWQCB or 404 permitting from the USACE.

### ***Cumulative Impacts***

Neither Build Alternative would cause water quality and storm water runoff to degrade because the proposed Project would include a bioretention BMP facility that would detain increased runoff, and would implement proper Construction Site, Design Pollution Prevention, and Treatment BMPs to protect water quality during construction and long-term operations, as described. Therefore, cumulative impacts are not anticipated for water quality and storm water resources.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to water quality or storm water runoff would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The proposed Project would minimize storm water impacts by implementing proper Construction Site, Design Pollution Prevention, and Treatment BMPs.

All storm water facilities to be constructed within the proposed Project would be constructed at the earliest phase possible.

Visual monitoring is required for storm water discharge during construction. Sampling and analysis for non-visible pollutants is required if pollutants may be present based on previous site contamination, or if any spill (even if due to breakage, malfunction or leakage of equipment) was observed during a visual inspection of the construction site that could result in the discharge of pollutants to surface waters.

Fiber rolls are proposed on the faces of slopes to slow down runoff and remove sediments. Gravel bags will be used as additional protection to intercept sediments. Standard Caltrans Inlet Protection is proposed at drainage inlets.

A construction entrance will be used to reduce tracking of dirt onto the roadways. Concrete washout will also be used to prevent cement from flowing to drainage systems. Locations of these temporary BMPs are subject to the Contractor's phasing of the work and timing of operations. The Contractor is ultimately responsible for developing a SWPPP that complies with the Permit.

Drain inlet stenciling will be required on City streets. Locations will be verified with Caltrans functional units during final design when all drainage units for the proposed Project are identified.

The proposed Project would treat at least 100 percent of the water quality flow for 100 percent of the net increased impervious area.

## **2.2.3 Geology/Soils/Seismic/Topography**

### **Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples



of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

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

### **Affected Environment**

This section is based on information provided in the "Initial Site Assessment Interstate 805 and Palm Avenue, San Diego County, California" dated April 15, 2011 (ISA 2011) and updated using information provided in the "Initial Site Assessment Report Update, Interstate 805 and Palm Avenue Interchange Project, San Diego County, California" dated March 19, 2018. Information from the "Structure Preliminary Geotechnical Report, Interstate 805/Palm Avenue Interchange Improvements, Bridge No. 57-775, San Diego, California" dated May 3, 2011 was also used as the basis for this section.

### ***Physiography and Topography***

The proposed Project area lies in the western portion of the Peninsular Ranges geomorphic province of Southern California between the coastal plain and the western foothill slopes. The Peninsular Ranges geomorphic province extends from the Transverse Ranges and Los Angeles Basin south to the tip of Baja California. The province varies in width from approximately 30 to 100 miles and is traversed by a group of faults and fault zones trending roughly northwest.

The general vicinity is located in an area with low relief mesas and drainages. No natural landmarks or landforms that would qualify as "outstanding examples of major geological features" have been identified within the proposed Project area.

The proposed Project area ranges in elevation from approximately 200 to 260 feet above Mean Sea Level (MSL) and slopes to the north toward the Otay River floodplain within Otay Valley. The elevation of the bridge deck varies from about 244 to 246 feet above MSL. High areas along Palm Avenue and the on- and off-ramps generally slope toward the I-805 main lanes.

### ***Surface Water and Groundwater***

The principal drainage in the proposed Project vicinity is the Otay River, located approximately 1,000 feet north of the northern extent of the proposed Project area. Surface drainage within the proposed Project area appears to follow surface contours and flows into storm drains located along I-805 main lanes and on- and off-ramps. Groundwater is estimated to occur at a depth of approximately 180 feet. Groundwater generally flows to the north toward the Otay Valley, but depths and flow direction may vary with land surface elevation, local irrigation practices, seasonal rainfall, the presence of alluvial deposits, and proximity to creeks and drainages.

### ***Geologic and Soil Conditions***

Geologic materials underlying the site primarily consist of artificial fill, young and old alluvial floodplain deposits, and San Diego Formation—Conglomerate Member, which are characterized as follows:

**Artificial Fill** - These deposits were likely placed during previous human construction, mining, or quarrying activities. Deposits are generally mapped along the south flank of the Otay River channel and may also occur under the east abutment and embankments of the existing I-805/Palm Avenue Interchange. These materials primarily consist of medium dense to dense sand, silty sand, clayey sand, and very stiff to hard silty clay and sandy clay with varying amounts of gravel and cobbles.

**Young Alluvial Floodplain Deposits** - These deposits of Holocene and late Pleistocene age are generally mapped in the Otay River channel and some adjacent drainage courses, including a narrow drainage course underlying the northern portion of the I-805/Palm Avenue Interchange. These materials are typically poorly consolidated, poorly sorted and permeable.

**Old Alluvial Floodplain Deposits** - These deposits of late to Middle Pleistocene age are mapped on canyon floors. These materials typically consist of moderately well consolidated, poorly sorted, permeable, slightly dissected gravel, sand, silt, and clay-bearing alluvium.

**San Diego Formation—Conglomerate Member** - This formation of early Pleistocene and late Pliocene age underlies most of the proposed Project area. This formation generally consists of reddish brown transitional marine and non-marine pebble and cobble conglomerate described as dense to very dense gravel and cobble conglomerate in silty sand, clayey sand, and sandy clay matrix.

In general, the soil within the proposed Project area is characterized as clay, clay loam, and cobbly clay loam to a depth of approximately 60 inches. Soil types in the proposed Project area include Huerhuero loam along the southern and western portions, Olivenhain cobbly loam along the center and northeastern portions, Diablo clay to the southeast, Salinas clay loam in the north, and Terrace escarpments in the northwest.

### ***Geologic Hazards***

The proposed Project site is located far from the ocean, so tsunamis are not a hazard. No volcanoes exist in the region. The bridge is not over a river, so scour would not occur. The likelihood for these issues to be of concern is negligible. The potential for the proposed Project area to be subject to other geologic hazards is generally low, as summarized below.

### **Seismicity**

The proposed Project site is located approximately 5.5 miles east of the Newport-Inglewood-Rose Canyon Fault (Silver Strand Section-Downtown Graben fault), which is capable of producing a 7.5 maximum earthquake. The proposed Project site is not located within an Alquist-Priolo Earthquake Study Zone as established by the State Geologist around known active faults. No active fault traces were identified through or near the proposed Project site by the preliminary geotechnical study review of available literature and field reconnaissance.

### **Liquefaction**

The primary factors that can lead to liquefaction include the presence of loose granular soils such as sands and silty sands, saturated soil conditions (generally due to shallow groundwater), and moderate to strong ground shaking. The potential for liquefaction to occur at the proposed Project site is considered to be low due to the presence of dense previously placed compacted fill and dense formational materials, and the lack of shallow permanent groundwater.

### Lateral Spreading

This hazard can be expected in liquefiable sites adjacent to slopes such as river channels or large bodies of water. Ground displacement typically decreases with increased distance from the slope face. The potential for lateral spreading to occur at the proposed Project site is considered to be low due to the lack of liquefiable materials at the site.

### Expansive Soils

These types of soils have a high potential to swell or shrink with changes in moisture content and are usually clays. However, most of the soil in the proposed Project area is granular in nature. Also, the proposed foundations would be supported by piles embedded in dense materials. Therefore, the potential for expansive soils to affect the proposed foundations is considered to be low.

### Corrosive Soils

Soil corrosion analysis of two borings indicated the bridge site would not be considered a corrosive environment, but the chloride content was slightly higher in a sample from the area of the NB off-ramp. Therefore, corrosive soils may be present in localized areas.

### Collapsible Soils

Collapsing soils are unsaturated soils that undergo a large volume change upon saturation, even without an increase in external loads. Such soils are generally porous with low dry density. In the proposed Project area, no porous or honeycomb structure has been identified. Also, if unacceptably loose surficial soils would be encountered during construction, these materials would be removed and recompacted. Therefore, the potential for collapsible soils is considered to be low.

## **Environmental Consequences**

Based on the findings of the Structure Preliminary Geotechnical Report (2011), the proposed Project area has a low susceptibility to damage from geologic hazards such as seismic shaking and liquefaction. Assuming recommended measures discussed below and other measures that may be developed during final design are implemented, the potential for construction workers or the travelling public to experience adverse impacts as a result of proposed Project geologic conditions is considered to be low for either Build Alternative.

No natural landmarks or landforms with special characteristics were identified in the proposed Project area, so no such impacts would occur with either Build Alternative.

### ***Cumulative Impacts***

Neither Build Alternative would cause geologic resources to degrade because no landmarks or special landforms would be impacted. The avoidance, minimization, and/or mitigation measures described below would be implemented to avoid and minimize adverse impacts from geologic conditions. Cumulative impacts are not anticipated for geology/soils/seismic/topography.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to soils, geology, seismic conditions or topography would occur.

## **Avoidance, Minimization, and/or Mitigation Measures**

The following measures recommended in the Structure Preliminary Geotechnical Report (2011) would be incorporated into either Build Alternative to avoid and minimize adverse impacts from geologic conditions:

- Proposed improvements in contact with the ground would be designed and constructed in accordance with the Caltrans Standard Specifications and good construction practices;
- For corrosion-sensitive proposed improvements in direct contact with potentially corrosive soils, further evaluations by a corrosion engineer would be performed to incorporate the necessary precautions to avoid premature corrosion;
- At a minimum, all retaining walls would be provided with a drainage system consisting of weep holes or backdrains adequate to prevent the buildup of hydrostatic forces.; specific drainage details would be developed during final design of the selected alternative.
- All grading would be performed in conformance with Caltrans Standard Specifications. Backfill placed behind abutment walls, retaining walls, and wing walls should have a very low to low expansion potential. Ponding or jetting of backfill would not be permitted;
- Near-surface, loose soils that would not be adequate for the support of new fill loads at abutment locations would be partially removed and recompacted prior to the placement of structural backfill and foundation construction;
- Additional field work and laboratory testing would be conducted during final design of the selected alternative, including borings along the proposed retaining wall alignments, roadway realignments, and new bridge alignments where no borings were previously drilled; final recommendations and Special Provisions would be based on the findings of subsurface exploration, testing, and analysis as presented in final Geotechnical Design Reports and Foundation Reports; and
- Structures would be designed in accordance with final recommended seismic parameters, including the appropriate peak ground acceleration.

BMPs proposed in **Section 2.2.2**, *Water Quality and Storm Water Runoff*, would stabilize and reduce potential erosion during construction.

### **2.2.4 Paleontology**

#### **Regulatory Setting**

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

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

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

#### **Affected Environment**

This section of the environmental document is based on the "Paleontological Report / Paleontological Evaluation Report & Paleontological Mitigation Plan - Interstate 805/Palm Avenue Interchange Project, City of San Diego, San Diego County, California," completed on February 1, 2016. This report includes a joint Paleontological Investigation Report (PIR)—

Paleontological Evaluation Report (PER), and a Paleontological Mitigation Plan (PMP). The joint PIR-PER has been prepared to identify and summarize existing paleontological resource data in the vicinity of the proposed Project, classify and discuss the significance of these resources, and evaluate and summarize any proposed Project related impacts that may impact paleontological resources for all alternatives. Subsequently, the PMP outlines mitigation measures and provides general guidance for the implementation of a paleontological mitigation program to reduce any Project related impacts to paleontological resources to less than significant levels.

### ***Geologic Formations***

The proposed Project lies within the southeastern portion of the San Diego Coastal Plain, a geomorphic region lying west of the Peninsular Ranges that is characterized by elevated Quaternary marine and fluvial terraces that have been dissected by modern west-flowing streams and rivers. **Figure 2.2.3** illustrates geologic map units in the vicinity. The proposed Project area is primarily underlain by deposits of the Pliocene-Pleistocene aged San Diego Formation, which lie unconformably on middle Eocene aged deposits of the Mission Valley Formation. The stratigraphy of the San Diego Formation is complex in the vicinity of the proposed Project area, due largely to the La Nacion Fault. It is likely that the strata traditionally mapped as the Mission Valley Formation actually represent the San Diego Formation, so those formations have been mapped as such in **Figure 2.2.3**. Reassignment of Mission Valley Formation strata to the San Diego Formation is consistent with the geologic mapping on the northern wall of Otay Valley, where the San Diego Formation and Mission Valley Formation are in fault contact.

Alluvium of Holocene age (Quaternary young alluvial floodplain deposits; Qya) is found in the modern river drainage of the Otay River and a local tributary underlying the I-805 alignment. Young alluvial floodplain deposits, old alluvial floodplain deposits, and the Mission Valley Formation either do not occur within the proposed Project area, or are not anticipated to be uncovered during construction within the proposed Project area.

Substantial amounts of artificial fill are found within the northern portion of the proposed Project area. This artificial fill was presumably imported during previous construction along the I-805 alignment, and extends from the northern approximately 0.25 mile of the proposed Project area, northward out onto the floor of the Otay Valley and the existing I-805 bridge. Other portions of the proposed Project area may also contain patches of artificial fill underlying the existing roadway. This fill is anticipated to be found overlying all areas mapped as old alluvial floodplain deposits (Qoa), and portions of areas mapped as young alluvial floodplain deposits (Qya) within the proposed Project area. Near the center of the proposed Project area, the remaining areas mapped as young alluvial floodplain deposits are obscured by concrete.

### ***Paleontological Value and Sensitivity***

Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. In addition, fossils are considered to be non-renewable resources because typically the organisms they represent no longer exist. Thus, once destroyed, a particular fossil can never be replaced. Individual rock units are typically assigned one of three paleontological potential ratings. Resources are rated with high, low, or no paleontological potential. The ratings are defined as follows:



**High Paleontological Potential** - This category includes rock units which, based on previous studies, contain or are likely to contain 1) abundant vertebrate fossils; 2) a few fossils (large or small vertebrate, invertebrate, or plant fossils) that may provide new and important data; 3) areas that may contain organic remains that can be dated and are older than Recent; or 4) areas that may contain unique new vertebrate deposits, traces, and/or trackways. These units include, but are not limited to, sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units suitable for the preservation of fossils.

**Low Paleontological Potential** - This category includes sedimentary rock units that: 1) are potentially fossiliferous, but have not yielded significant fossils in the past; 2) have not yet yielded fossils, but possess a potential for containing fossil remains; or 3) contain common and/or widespread invertebrate fossils if the characteristics of the species contained in the rock are well understood. Sedimentary rocks expected to contain vertebrate fossils are not placed in this category because vertebrates are generally rare and found in more localized strata.

**No Paleontological Potential** - Rock units of intrusive igneous origin, most extrusive igneous rocks, and moderately to highly metamorphosed rocks are classified as having no potential for containing significant paleontological resources.

Based on the results of the paleontological record search, literature search, and pedestrian survey for the proposed Project area, a high paleontological potential is assigned to the San Diego Formation. This ranking is based on the significant fossil remains, particularly marine and terrestrial mammals, known from within one mile of the proposed Project area. The same type of conglomerate formations observed within the proposed Project area during the walking survey produced fossil remains of mammals approximately 1.5 miles to the south.

The San Diego Formation is a marine sedimentary rock unit of late Pliocene- to early Pleistocene-age (approximately 3.5 to 1.5 million years old), which was deposited in an open-marine embayment similar in size and shape to modern-day Monterey Bay. The shoreline for this ancient embayment was well to the east of the present shoreline, with beach deposits reported in Bonita, La Mesa, and Lemon Grove. Typical exposures of this formation consist of yellowish-gray, fine-grained, friable sandstone. Poorly-sorted gravel, pebble conglomerate, and well-laminated claystone also occur within the formation.

The sedimentary rocks of the San Diego Formation preserve the largest and most diverse assemblage of Pliocene marine organisms known from California. Previous paleontological studies of the San Diego Formation have documented extremely diverse assemblages of marine mollusks, arthropods, echinoderms, and vertebrates including sharks, rays, bony fish, sea birds, walrus, fur seals, sea cow, dolphins, and baleen whales. In addition, these studies have reported rare fossil land plants including leaves and cones of pine, oak, laurel, cottonwood and avocado, as well as remains of terrestrial mammals including rodents, rabbits, cats, dogs, skunks, tapirs, horses, peccaries, camels, antelopes, deer, and gomphotheres.

Artificial fill has no paleontological potential based on the fact that it has been moved from its original site of deposition. If any fossils are found within artificial fill, they have lost their original geographic and stratigraphic context, and thus are not scientifically significant.

## **Environmental Consequences**

The paleontological records search, literature search, and pedestrian survey conducted for the paleontological report indicate that both Build Alternatives for the proposed Project would result in impacts to the Pliocene – Pleistocene aged San Diego Formation, which has a high

paleontological resource potential, and to previously unmapped artificial fill deposits, which have no paleontological potential. Though other formations (e.g., Mission Valley Formation, old alluvial floodplain deposits, young alluvial floodplain deposits) are mapped within the proposed Project area, it was determined that these units are either not present in the proposed Project area, or would not be impacted by the proposed Project.

For both Build Alternatives, specific areas of excavations that are likely to impact the San Diego Formation include the following:

- Excavations for the foundation of the infill wall to be constructed between the existing bridge support columns in association with retrofitting;
- Excavations for the concrete pile foundation to be constructed to support southern widening of the Palm Avenue bridge structure;
- Excavations for widening of I-805 on-ramps and off-ramps along the perimeter of the proposed Project area (with the exception of widening along the northern approximately 0.25 miles of the proposed Project area, which would impact existing artificial fill);
- Excavations associated with widening of EB Palm Avenue west of the Palm Avenue bridge structure; and
- Excavations associated with eastward realignment of the Palm Avenue intersection and I-805 North on-ramps and off-ramps.

In addition to the impacts in the bullet list above, the most notable impacts to the San Diego Formation from Alternative 1 + IV would be associated with loop ramp construction and associated realignment of the I-805 North off-ramp to Palm Avenue. These structures would require extensive eastward excavations into the existing hill slope, which consists entirely of San Diego Formation sediments.

For Alternative 2 + IV, the most notable additional impacts to the San Diego Formation would arise from widening the Palm Avenue bridge structure to the north, which would require excavations for an additional support column, as well as the construction of more extensive retaining walls along Palm Avenue.

Based on current available information and project description, it is anticipated that a larger volume of San Diego Formation sediments would be impacted by construction of Alternative 1 + IV than construction of Alternative 2 + IV.

### ***Cumulative Impacts***

Neither Build Alternative would cause paleontological resources to degrade because the proposed Project would require monitoring during excavation and recovery of fossil remains if they are detected. The proposed Project would implement these and other measures described below in avoidance, minimization, and/or mitigation measures to protect and recover fossil remains. Therefore, cumulative impacts are not anticipated for paleontological resources.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to paleontological resources would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

Both Build Alternatives for the proposed Project would involve excavations into high paleontological potential deposits of the San Diego Formation. Implementing a PMP, will

minimize construction-related impacts to paleontological resources. Measures proposed in the PMP are outlined below, with the recommended activity for each measure described in more detail in the PMP.

- a) Pre-Construction: Prior to the commencement of construction, a Qualified Project Paleontologist shall be retained to oversee the mitigation Program, and a regional fossil repository shall be designated to receive any discovered fossils. Lists of all qualified paleontologists overseen by the Project Paleontologist, and maps of areas to be monitored for paleontological resources shall be submitted to the agency administering the construction contract for approval.
- b) Pre-Construction: The qualified paleontologist will attend the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues.
- c) Pre-Construction: The qualified paleontologist shall conduct a paleontological resource training workshop to be attended by all earth excavation personnel.
- d) During Construction: A paleontological monitor will be on-site on a full-time basis during the original cutting of previously undisturbed deposits of high paleontological potential (San Diego Formation) to inspect exposures for contained fossils.
- e) During Construction: If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. The paleontologist (or paleontological monitor) has the authority to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner.
- f) Post-Construction: Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, and cataloged as part of the mitigation program.
- g) Post-Construction: Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited (as a donation) in the designated fossil repository. Donation of the fossils shall be accompanied by financial support for initial specimen storage.
- h) Post-Construction: A final summary report will be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Permits for paleontological mitigation are not anticipated to be required, as the proposed Project does not involve property under the jurisdiction of governmental agencies such as the U.S. Department of Agriculture, the U.S. Department of the Interior, the California Department of Park and Recreation, or the California Coastal Commission.

### ***CEQA Considerations***

In terms of analysis under CEQA, both Build Alternatives for the proposed Project would involve excavations into high paleontological potential deposits of the San Diego Formation. Therefore, impacts of both Build Alternatives to paleontological resources would exist under CEQA. A PMP would be implemented in order to reduce construction-related impacts to paleontological resources to less than significant levels under CEQA.







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## 2.2.5 Hazardous Waste/Materials

### Regulatory Setting

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

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

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

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

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

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

### Affected Environment

This section is based on information provided in the "Initial Site Assessment Interstate 805 and Palm Avenue, San Diego County, California" (ISA) dated April 15, 2011 and was updated based on information provided in the "Initial Site Assessment Report Update" dated March 19, 2018. Information was also gathered from the "Aerially-Deposited Lead Site Investigation Report,

Interstate 805 and Palm Avenue Interchange Project, San Diego, California" (ADL Study) dated November 23, 2015.

These reports provide an evaluation of the potential hazardous waste concerns within the proposed Project area. The following discussion pertains to both Build Alternatives. The ISA included the following work:

- Review of available information to describe the topographic, geologic, and hydrologic characteristics of the proposed Project area and vicinity;
- Site reconnaissance to observe conditions and activities that could indicate recognized environmental conditions;
- Review of historical references including aerial photographs, topographic maps and city directories to identify past uses;
- Review of publicly available federal, state and local regulatory agency records, including information from the SWRCB, San Diego County Department of Environmental Health (DEH), and State of California Division of Oil, Gas, and Geothermal Resources;
- Review of previous documents and reports addressing the proposed Project area;
- Interviews with representatives of Caltrans Environmental Department and documentation that attempts to interview the SWRCB representative for the San Diego region were unsuccessful;
- Development of opinions, conclusions and recommendations; and
- Preparation of a report describing the assessment and presenting the results.

Specific findings of the ISA included the identification of potential issues at several locations, as discussed under Environmental Consequences. In addition, general potential environmental concerns that may be encountered during construction include the following:

- Potential presence of subsurface features such as undocumented underground storage tanks, septic systems, wells, pipes, and dry wells;
- Bridge and other structures that may have asbestos-containing building materials and/or lead-containing paint;
- Yellow thermoplastic paint striping which can contain lead chromate;
- Treated wood; and
- Soil with potential contaminants such as heavy metals or petroleum hydrocarbons.

The ADL Study investigated the exposed soil along the I-805/Palm Avenue north and south on- and off-ramps in order to evaluate the concentrations of ADL in soil that would be disturbed during construction of the proposed Project. The ADL Study included the excavation of 40 borings from which 80 soil samples were collected. The maximum sampling depth was 2.5 feet. The ADL Study concluded that based on testing and analysis, soil excavated to a depth of 2.5 feet would be classified as non-hazardous based on lead content. In addition, analyzed lead levels in the soil samples were below the California Human Health Screening Levels for residential and commercial land use and within the published background range.

## **Environmental Consequences**

The ISA identified two locations where past unauthorized releases containing petroleum hydrocarbons would have a low potential to impact soil beneath the proposed Project area of either Build Alternative. In addition, the site of a former trash dump lies within an area that would be excavated for Alternative 1 + IV but not Alternative 2 + IV. Potential issues associated with these three sites are summarized below and discussed in more detail in the ISA (2011) and reevaluated in the updated ISA (2018).

### Unocal Service Station #6893, 4360 Palm Avenue

This facility is located in the northwest quadrant of the proposed Project area immediately north of Palm Avenue within the Palm Ridge Shopping Center. This facility is currently operating as a Chevron gas station. Two releases were identified for this facility, cases H21349-001 and H21349-002. Case H21349-001 relates to a release of gasoline to shallow soil in October 1992. As of February 1993, the regulatory status of this release is “Completed – Case Closed”. Case H21349-002 relates to a release of diesel fuel that impacted soil in June 1998. Regulatory closure for this site was granted in October 2003. Although regulatory closure has been granted for both DEH cases associated with this facility, both Build Alternatives for the proposed Project include permanent Right-of-Way takes, temporary construction easements, and retaining walls on the north side of the Palm Avenue adjacent to the facility. Therefore, there is a potential for impacted soil to be encountered during proposed construction activities.

### Kaiser Foundation Health Plan, Inc., 4650 Palm Avenue

This facility is located in the northeast quadrant of the proposed Project area north of Palm Avenue. It is listed on the SWRCB Spills, Leaks, Investigations and Cleanup (SLIC) program database as an active cleanup program site with ongoing assessment. Site assessment reports explain that a gasoline spill and fire occurred on June 16, 2010 on the north side of Palm Avenue west of the intersection of Palm Avenue and Dennery Road due to a tanker truck trailer rollover. Consequently, an unknown volume of a mixture of gasoline and water flowed toward a nearby storm drain on Palm Avenue. The storm drain extends underneath the I-805 North on-ramp to an outfall within the Otay River Valley. Site assessment activities conducted in 2010 included soil sampling at the spill site, installation of monitoring wells at the storm drain outlet, and soil and water sampling within and beneath the storm drain. Regulatory closure was granted for this site in June 2011. Although regulatory closure has been granted, both Build Alternatives for the proposed Project include permanent Right-of-Way takes, temporary construction easements, and retaining walls on the north side of the Palm Avenue adjacent to the location of the release and fire. Therefore, there is a potential for impacted soil to be encountered during proposed construction activities.

### South Bay Burn Site, Palm Avenue and I-805

The former South Bay Burn Site is located approximately 300 feet south of Palm Avenue and approximately 400 feet east of the I-805 North off-ramp, apparently beneath a portion of the existing Palm Promenade Shopping Center in the southeast quadrant of the proposed Project area. The ISA noted that the site was used by the County of San Diego Department of Public Works as a burning trash dump during the 1950s and 1960s and may contain approximately 50,000 to 60,000 cubic yards of material consisting of soils, gravel, cobbles, concrete, metal, glass, ceramics, and tree stumps. Soil sampling conducted in the late 1980s and in 1990 detected lead, volatile organic compounds (VOCs), trichloroethene, and trace concentrations of chlorinated pesticides and PCBs. The shopping center has been graded and is currently covered with hardscapes and structures. In addition, the case is listed on the SWRCB

GeoTracker website as "Completed-Case Closed as of 3/11/2005" and that no cleanup actions exist.

The ISA concluded that remnants of the burn site may potentially be encountered during proposed construction activities near the I-805 North off-ramp. This possibility is more likely for Alternative 1 + IV, which involves relocating the I-805 North off-ramp to the east and constructing a retaining wall in the slope along the western edge of the Palm Promenade Shopping Center. The proposed Project would need a permanent easement and an Irrevocable Offer to Dedicate for a portion of the slope in this location in order to build the new loop ramp between the I-805 main lanes and I-805 North off-ramp.

For Alternative 2 + IV, the I-805 North off-ramp would be widened in its current location and the slope along the western boundary of the Palm Promenade Shopping Center would not be disturbed.

Assuming recommended measures discussed below and other measures that may be developed during final design are followed, the potential for construction workers or the travelling public to experience adverse impacts as a result of proposed Project hazardous waste/materials conditions is considered to be low for both Build Alternatives.

Aerially deposited lead (ADL) from the historical use of leaded gasoline, exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as a result of ADL on the state highway system Right-of-Way within the limits of the proposed Project alternatives. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the proposed Project limits as long as all requirements of the ADL Agreement are met.

### ***Cumulative Impacts***

Neither Build Alternative would cause a degradation related to hazardous waste/materials because appropriate regulations and measures described below in avoidance, minimization, and/or mitigation measures would be implemented to protect workers and the travelling public. Therefore, cumulative impacts are not anticipated for hazardous waste/materials.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to or from hazardous waste/materials would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following avoidance/minimization measures included in the ISA would be incorporated into both Build Alternatives to avoid and minimize adverse impacts from hazardous waste/materials conditions:

- Observations would be made during excavations in the portion of the proposed Project area adjacent to the South Bay Burn Site; if remnants of this site are encountered, a qualified environmental professional would be consulted.
- If subsurface features including undocumented underground storage tanks, septic systems, wells, pipes, and dry wells, etc., are encountered, they would be properly handled, abandoned or disposed of in accordance with county permit requirements;

- Bridge as-built drawings would be reviewed for use of asbestos-containing materials and lead paint as construction materials prior to renovation or demolition of bridge structures;
- Excess soil generated from the proposed Project for offsite disposal would be subject to sampling and analytical testing for potential contaminants of concern (e.g., heavy metals, petroleum hydrocarbons) for designated disposal facility acceptance; and
- Management of excess soil would be performed in accordance with regulatory protocols. If suspected contamination is encountered during construction, the area would be isolated and sampling performed to determine the nature of the suspected impacts, construction worker health and safety protocols, and disposal alternatives.

The following avoidance/minimization measure for worker protection included in the ADL Study would be incorporated into both Build Alternatives to avoid and minimize adverse impacts from hazardous waste/materials conditions:

- The contractor(s) would prepare a project-specific health and safety plan to prevent or minimize worker exposure to lead in soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols for the handling of soil.

## **2.2.6 Air Quality**

### **Regulatory Setting**

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM) - which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM<sub>10</sub>) and particles of 2.5 micrometers and smaller (PM<sub>2.5</sub>) - and sulfur dioxide (SO<sub>2</sub>). In addition, national and state standards exist for lead (Pb) and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H<sub>2</sub>S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

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

### **Conformity**

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



Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and in some areas (although not in California), sulfur dioxide (SO<sub>2</sub>). California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO<sub>2</sub>, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed Project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the proposed Project comes from a conforming RTP and TIP; the proposed Project has a design concept and scope<sup>3</sup> that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the proposed Project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

The FHWA Conformity Determination for the proposed Project, dated May 14, 2019, can be found in **Appendix G** of this Final Environmental Document.

## **Affected Environment**

This section is based on information provided in the "Air Quality Technical Report for the Interstate 805/Palm Avenue Interchange Improvements" (AQTR) dated February 4, 2016 and the "Aerially-Deposited Lead Site Investigation Report Interstate 805 and Palm Avenue Interchange Project San Diego, California" (ADL Study) dated November 23, 2015.

### ***General Climatic and Meteorological Conditions***

The proposed Project is located in the San Diego Air Basin (SDAB), which has the same boundaries as San Diego County. The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. A semi-permanent high-pressure area (the Pacific High) in the eastern Pacific Ocean strongly affects the San Diego climate, keeping skies clear for much

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<sup>3</sup> "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

of the year. When the Pacific High moves southward during the winter, low pressure storms are brought into the region. A common atmospheric condition known as a temperature inversion affects air quality in San Diego, especially during the warmer months of May through October. Inversion layers inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

### ***Attainment and Nonattainment Status of Criteria Pollutants***

The SDAB currently meets the federal standards for all criteria pollutants except O<sub>3</sub> and, as of the time the AQTR was prepared, was under a maintenance plan for CO. As of June 2018, the Federal Project Area Attainment Status for CO in San Diego has changed from attainment-maintenance to attainment-unclassified.

**Table 2.2.3** presents the current ambient air quality standards, effects and SDAB status for criteria pollutants. If a region does not meet federal or state standards, the regional air quality authority (the San Diego Air Pollution Control District in this case) must prepare a State Implementation Plan (SIP) and Air Quality Attainment Plan (AQAP) that demonstrates how the regional will come into attainment with federal and state standards, respectively. The status of the SIP and the state-level Air Quality Attainment Plan for the SDAB is summarized in **Table 2.2.4**.

## **Environmental Consequences**

### ***Regional Conformity***

The proposed Project site is located in the SDAB, which currently meets the federal standards for all criteria pollutants except ozone (O<sub>3</sub>), for which it is classified as a “moderate” nonattainment area. Due to the USEPA’s status as a “moderate” nonattainment area in 2015, the SDAB was required to develop an updated SIP to demonstrate that it will meet the 8-hour standard by July 20, 2018, and before a proposed Project can be approved there must be a demonstration that the proposed Project conforms to the SIP and other federal rules and regulations. The proposed Project must conform at both regional and project levels to be approved.

Regional conformity is demonstrated if emissions associated with the proposed Project are contained within the Regional Transportation Plans (RTPs) and Federal Transportation Improvement Plans (FTIPs).

The proposed Project is listed in the 2050 financially constrained Regional Transportation Plan which was found to conform by SANDAG on October 9, 2015, and FHWA and FTA will make a regional conformity determination finding pending the selection of an alternative. The proposed Project is also included in the SANDAG financially constrained 2018 Regional Transportation Improvement Program, pages 3-105, F-34, and F-37. The SANDAG 2018 Regional Transportation Improvement Program was determined to conform by FHWA and FTA on December 17, 2018. The design concept and scope of the proposed Project is consistent with the project description in the 2050 RTP, 2018 RTIP, and the “open to traffic” assumptions of SANDAG’s regional emissions analysis.

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**Table 2.2.3 State and Federal Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State <sup>4</sup> Standard	Federal <sup>5</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone (O <sub>3</sub> )	1 hour	0.09 ppm <sup>6</sup>	--- <sup>7</sup>	High concentrations irritate lungs, long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NO <sub>x</sub> ) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.	Non-Attainment	Non-Attainment Moderate
	8 hours	0.070 ppm	0.070 ppm (4 <sup>th</sup> highest in 3 years)				
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Attainment	Attainment- <u>Unclassified</u>
	8 hours	9.0 ppm <sup>1</sup>	9 ppm				
	8 hours (Lake Tahoe)	6 ppm	---				
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>8</sup>	24 hours	50 µg/m <sup>3</sup> <sup>9</sup>	150 µg/m <sup>3</sup> (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM <sub>10</sub> .	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Non-Attainment	Attainment- <u>Unclassified</u>
	Annual	20 µg/m <sup>3</sup>	--- <sup>5</sup>				
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>5</sup>	24 hours	---	35 µg/m <sup>3</sup>	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM <sub>2.5</sub> size range. Many toxic & other aerosol and solid compounds are part of PM <sub>2.5</sub> .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO <sub>x</sub> , sulfur oxides (SO <sub>x</sub> ), ammonia, and ROG.	Non-Attainment	Attainment- <u>Unclassified</u>
	Annual	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>				
	24 hours (conformity process <sup>10</sup> )	---	65 µg/m <sup>3</sup>				
	Secondary Standard (annual; also for conformity process <sup>5</sup> )	---	15 µg/m <sup>3</sup> (98 <sup>th</sup> percentile over 3 years)				

Table Continued on Next Page

<sup>1</sup> State standards are "not to exceed" or "not to be equaled or exceeded" unless stated otherwise.

<sup>2</sup> Federal standards are "not to exceed more than once a year" or as described above.

<sup>4</sup> California Standards for ozone, carbon monoxide, sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, 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 Section 70200 of Title 17 of the California Code of Regulations.

<sup>5</sup> National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentration, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

<sup>6</sup> ppm = parts per million

<sup>7</sup> Prior to 6/2005, the 1-hour ozone NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still in use in some areas where 8-hour ozone emission budgets have not been developed, such as the S.F. Bay Area.

<sup>8</sup> Annual PM<sub>10</sub> NAAQS revoked October 2006; was 50 µg/m<sup>3</sup>. 24-hr. PM<sub>2.5</sub> NAAQS tightened October 2006; was 65 µg/m<sup>3</sup>. Annual PM<sub>2.5</sub> NAAQS tightened from 15 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup> December 2012 and secondary annual standard set at 15 µg/m<sup>3</sup>.

<sup>9</sup> µg/m<sup>3</sup> = micrograms per cubic meter

<sup>10</sup> The 65 µg/m<sup>3</sup> PM<sub>2.5</sub> (24-hr) NAAQS was not revoked when the 35 µg/m<sup>3</sup> NAAQS was promulgated in 2006. The 15 µg/m<sup>3</sup> annual PM<sub>2.5</sub> standard was not revoked when the 12 µg/m<sup>3</sup> standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (7/20/2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the "Interim" period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

(Continued) Table 2.2.3 State and Federal Criteria Air Pollution Standards, Effects, and Sources

Pollutant	Averaging Time	State <sup>11</sup> Standard	Federal <sup>12</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	0.100 ppm <sup>13</sup>	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain & nitrate contamination of storm water. Part of the "NOx" group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Attainment	Attainment-Unclassified
	Annual	0.030 ppm	0.053 ppm				
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	0.075 ppm <sup>14</sup> (99 <sup>th</sup> percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Attainment	Attainment-Unclassified
	3 hours	---	0.5 ppm <sup>15</sup>				
	24 hours	0.04 ppm	0.14 ppm (for certain areas)				
	Annual	---	0.030 ppm (for certain areas)				
Lead (Pb) <sup>16</sup>	Monthly	1.5 µg/m <sup>3</sup>	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.	Attainment	Attainment-Unclassified
	Calendar Quarter	---	1.5 µg/m <sup>3</sup> (for certain areas)				
	Rolling 3-month average	---	0.15 µg/m <sup>3</sup> <sup>17</sup>				
Sulfate	24 hours	25 µg/m <sup>3</sup>	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Attainment	N/A
Hydrogen Sulfide (H <sub>2</sub> S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	Attainment	N/A
Visibility Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	---	Reduces visibility. Produces haze.  NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above.  May be related more to aerosols than to solid particles.	Attainment	N/A
Vinyl Chloride <sup>11</sup>	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer.  Also considered a toxic air contaminant.	Industrial processes	Attainment	N/A

<sup>1</sup> State standards are "not to exceed" or "not to be equaled or exceeded" unless stated otherwise.

<sup>2</sup> Federal standards are "not to exceed more than once a year" or as described above.

<sup>13</sup> Final 1-hour NO<sub>2</sub> NAAQS published in the Federal Register on 2/9/2010, effective 3/9/2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause re-designation to nonattainment in some areas after 2016.

<sup>14</sup> EPA finalized a 1-hour SO<sub>2</sub> standard of 75 ppb (parts per billion [thousand million]) in June 2010. Nonattainment areas have not yet been designated as of 9/2012.

<sup>15</sup> Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

<sup>16</sup> The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM<sub>10</sub> and, in larger proportion, PM<sub>2.5</sub>. Both the ARB and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and PM<sub>2.5</sub> as toxic air contaminants. No exposure criteria exists for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

<sup>17</sup> Lead NAAQS are not considered in Transportation Conformity analysis.

Adapted from Sonoma-Marín Narrows Draft EIR and California ARB Air Quality Standards chart (<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>).



**Table 2.2.4 Status of State Implementation Plans in the San Diego Air Basin**

Pollutant	Status
Ozone (O <sub>3</sub> )	In July 1997, the U.S. EPA established a new federal 8-hour standard for O <sub>3</sub> of 0.085 parts per million (ppm). The U.S. EPA designated 15 areas in California that violate the federal 8-hour O <sub>3</sub> standard on April 15, 2004. In 2008, the U.S. EPA lowered the 8-hour standard for O <sub>3</sub> to 0.075 ppm, and on October 26, 2015, the U.S. EPA adopted a final rule to lower the 8-hour standard further to 0.070 ppm. Each nonattainment area's classification and attainment deadline is based on the severity of its O <sub>3</sub> problem. The SDAB is classified as "moderate nonattainment," for the 8-hour ozone standard, which is the second-least severe classification. In December 2016, the SDAPCD (San Diego Air Pollution Control District) finalized an updated SIP to demonstrate that it will meet the 8-hour standard by July 20, 2018.
Carbon Monoxide (CO)	On April 26, 1996, the California ARB approved the "Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas" as part of the SIP for CO. The U.S. EPA approved this revision on July 1, 1998 and redesignated the SDAB to attainment. On October 22, 1998, the ARB revised the SIP to incorporate the effects of the recent action to remove the wintertime oxygen requirement for gasoline in certain areas. On July 22, 2004, the ARB approved an update to the SIP that showed how the ten areas will maintain the standard through 2018, revised emission estimates, and established new on-road motor vehicle emission budgets for transportation conformity purposes. The update was approved by the U.S. EPA on November 30, 2005, effective January 30, 2006. <u>In June 2018, the Federal Project Area Attainment Status for CO in San Diego changed from attainment-maintenance to attainment-unclassified.</u>

Source: AQTR 2016

**Project Level Conformity**

Carbon Monoxide (CO)

At the time the AQTR was prepared, the SDAB was under a maintenance plan for CO. However, as of June 2018, the Federal Project Area Attainment Status for CO in San Diego changed from attainment-maintenance to attainment-unclassified. The analysis for CO, below, reflects the attainment-maintenance status prior to June 2018.

For a CO maintenance of nonattainment area, project level conformity is demonstrated by showing that the proposed Project would not cause or contribute to any new localized CO violations or increase the frequency or severity of any existing CO violations in CO nonattainment and maintenance areas. The CO portion of the Transportation Conformity Rule applies to the proposed Project because the SDAB is classified as a federal CO maintenance area. Procedures and guidelines for use in evaluating the potential local level CO impacts of a project are contained in the CO Protocol discussed in the AQTR, which states that the determination of project-level CO impacts should be carried out in accordance with the Local CO Analysis flow charts shown as Figure 3 of the Protocol, which is included as Attachment 1 of the AQTR.

The CO Protocol involves answering a series of questions to identify the level of effort required for the CO conformity determination. Prior to June 2018, the proposed Project was in a CO attainment-maintenance area following a 1998 redesignation from a CO nonattainment area; was redesignated as attainment in 1998; and has had continued attainment as verified with the SDAPCD. However, the proposed Project has the potential to affect air quality due to increased congestion at one of the proposed Project area intersections. As discussed in the *Traffic Operational Analysis* (2014), under both Build Alternatives, the intersection of Palm Avenue and the Palm Ridge Shopping Center entrance (**Figure 2.2.4**) would operate at LOS E or F by Year 2040. The LOS at that intersection would degrade from the No Build Alternative under both Build Alternatives. Therefore, per the Protocol, a CO "hot spot" evaluation was required at the time the AQTR was prepared following the guidance in the CO Protocol.



Figure 2.2.4  
Location of CO "Hot Spot" Evaluation

The AQTR contains the CO "hotspot" analysis. Curbside CO concentrations were calculated using the CALINE4 dispersion model developed by Caltrans, using peak hour am and pm traffic volumes and worst-case meteorological assumptions. Worst-case meteorological assumptions are based on a wind speed of 0.5 meters/second and an atmospheric stability of 7, which results in the lowest dispersion of pollutants and therefore the highest impacts. The analysis was conducted using CO emission factors from the EMFAC2014 model for a vehicle speed of 5 miles per hour. The traffic volumes for both Build Alternatives are the same at the intersection of Palm Avenue and the Palm Ridge Shopping Center entrance. Therefore, it was not necessary to calculate emissions separately for both Build Alternatives. Recently, the USEPA (Federal Register Vol. 82, No. 10, page 5182 ff January 17, 2017) removed CALINE4 from the list of approved dispersion models, to be replaced by a less conservative model. However, the USEPA also provided a 3-year transition period and CALIN4 is still the recommended model by the ARB. The ARB has also published a new version of EMFAC (EMFAC2017), but the new EMFAC has not yet been approved by the USEPA (as of March 2018), therefore, EMFAC2014 was used in the AQTR.

The results of the CO "hot spot" modeling are shown in **Table 2.2.5**. Traffic congestion resulting from the proposed Project would not result in an exceedance of the 1-hour or 8-hour NAAQS or CAAQS, and would not create a CO "hot spot." CALINE4 outputs are provided in Appendix A of the AQTR.

**Table 2.2.5 CO "Hot Spots" Modeling Results (Maximum CO Concentrations, ppm)**

Intersection	Peak Hour	2040 Build Alternatives	
		1-hour	8-hour
Palm Avenue and Palm Ridge Shopping Center Entrance	a.m.	3.5	2.45
	p.m.	3.6	2.52
Maximum Allowable CO Concentration		35	9

Source: AQTR 2016

### Particulate Matter (PM<sub>x</sub>)

On March 10, 2006, the U.S. EPA published a final rule that establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality impacts in PM<sub>2.5</sub> and PM<sub>10</sub> nonattainment and maintenance areas (FHWA 2006). The U.S. EPA final rule requires PM<sub>2.5</sub> and PM<sub>10</sub> hot spot analyses to be performed for "projects of air quality concern" (POAQC). Projects not identified as POAQC are considered to meet statutory requirements without any further hot spot analyses. The rule defines POAQC as projects within a federally designated PM<sub>2.5</sub> or PM<sub>10</sub> nonattainment or maintenance area, funded or approved by the FHWA or FTA, and one of various types of projects, including new or expanded highway projects that have a significant number of or significant increase in diesel vehicles; and projects in, or affecting locations, areas, or categories of sites that are identified in the PM<sub>2.5</sub> applicable implementation plan as sites of violation or possible violation.

The proposed I-805/Palm Avenue Interchange Improvements Project is not within a federally designated PM<sub>2.5</sub> or PM<sub>10</sub> nonattainment or maintenance area, is not funded by the FHWA or FTA (although Caltrans has NEPA and CEQA documentation responsibility), and is not a POAQC as defined in the PM Guidance. Therefore, the proposed Project would not require a PM "hot spot" analysis.



## Ozone (O<sub>3</sub>)

As discussed above, the SDAB currently meets the federal standards for all criteria pollutants except O<sub>3</sub>. The proposed I-805/Palm Avenue Interchange Improvements Project is included in the 2050 RTP and 2018 RTIP. The design concept and scope of the proposed Project is consistent with the Project description in the 2050 RTP, the 2018 RTIP, and the assumptions in SANDAG's regional emissions analysis. The proposed Project is included in the regional emissions analysis, thus supporting the currently conforming RTP and RTIP, an affirmative regional conformity determination is made for the proposed Project, including for O<sub>3</sub>.

## Hot Spots

Even in areas other than nonattainment/maintenance areas there is a potential for CO or PM violations of the state of federal standards to occur, and thus for NEPA and CEQA purposes the potential for CO or PM hotspots needs to be analyzed. Project-specific CO "hot spot" modeling results are discussed above under project-Level Conformity. The analysis confirmed that traffic congestion resulting from the proposed Project would not result in an exceedance of the 1-hour or 8-hour NAAQS or CAAQS, and would not create a CO "hot spot." Also as discussed above, the proposed Project was assessed for the need to conduct a PM hot spot analysis in the AQTR. The proposed Project was found to not be a POAQC, thus exceedances of the PM standards are not expected, and no further analysis is needed

## ***Additional Environmental Analysis***

### Mobile Source Air Toxics

A discussion of Mobile Source Air Toxics (MSAT) was included in the AQTR. MSAT are compounds emitted from highway vehicles and non-road equipment. According to the FHWA Interim Guidance on Addressing MSAT (October 18, 2016), this proposed Project presents a low potential for MSAT effects due to the fact that the proposed Project will serve to improve operations at the I-805/Palm Avenue Interchange without adding substantial new capacity.

For each alternative in this IS/EA the amount of MSAT emitted would be proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the preferred action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to the EPA's MOVES2014 model, emissions of all of the priority MSAT decreases as speed increases. The estimated VMT under each alternative is nearly the same, thus it is expected there would be no appreciable difference in overall MSAT emissions among the alternatives. Also, regardless of the alternative chosen, 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 over 90 percent between 2010 and 2050 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016). 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 VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

In FWHA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with the proposed alternatives. The outcome of such an assessment, adverse or not, would be influenced more by 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.

The 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 Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The 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 MSAT, including the Health Effects Institute (HEI). The following are HEI studies that regard the health impacts of MSAT:

- The National Near Roadway MSAT Study, [http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/index.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/index.cfm);
- Advanced Collaborative Emissions Study, <https://www.healtheffects.org/publication/advanced-collaborative-emissions-study-aces-lifetime-cancer-and-non-cancer-assessment>;
- Diesel Emissions and Lung Cancer: An Evaluation of Recent Epidemiological Evidence for Quantitative Risk Assessment (Special Report 19), <https://www.healtheffects.org/publication/diesel-emission-and-lung-cancer-evaluation-recent-epidemiological-evidence-quantitative>;
- Personal and Ambient Exposures to Air Toxics in Camden, New Jersey, Health Effects Institute No. 160, <https://www.healtheffects.org/publication/personal-and-ambient-exposures-air-toxics-camden-new-jersey>;
- Air Toxics Exposure from Vehicle Emissions at a U.S. Border Crossing: Buffalo Peace Bridge Study, Health Effects Institute No. 158, <https://www.healtheffects.org/publication/air-toxics-exposure-vehicle-emissions-us-border-crossing-buffalo-peace-bridge-study>; and
- Concentrations of Air Toxics in Motor Vehicle-Dominated Environments, Health Effects Institute No.156 <https://www.healtheffects.org/publication/concentrations-air-toxics-motor-vehicle-dominated-environments>.

### Lead

The USEPA required refiners to eliminate lead in gasoline fuels starting in 1996, and thus there is no potential for lead impacts resulting from traffic associated with this proposed Project. Trace amounts of lead have been reported in diesel exhaust, but the amount emitted is so small that the lead (only) component of diesel exhaust has not been associated with potential environmental health effects.



## ***Construction (Short-term) Impacts***

### Construction Emissions of Criteria Pollutants

The principal criteria pollutants emitted during construction would include PM<sub>10</sub> and PM<sub>2.5</sub>, which would be generated by fugitive dust created during clearing, grubbing, excavation and grading; demolition of existing structures and pavement; vehicle travel on paved and unpaved roads; and material blown from unprotected graded areas, stockpiles, and haul trucks. Generally, the distance that particles drift from their source depends on their size, emission height, and wind speed. A secondary source of pollutants during construction would be the engine exhaust from construction equipment and vehicles during all proposed construction activities. Emissions of concern from construction equipment would include NO<sub>x</sub> and volatile organic compounds (VOCs) that would contribute to the formation of O<sub>3</sub>, which is a regional nonattainment pollutant and diesel particulate matter (DPM) from diesel-fueled engine exhaust.

According to the FHWA, if construction will last more than two years and/or will substantially affect traffic due to detours, road closures, and temporary terminations, then the CO and PM<sub>10</sub> hot-spot impacts of the resulting traffic flow changes during construction should be analyzed. Construction of the proposed Project would last approximately 18 months. Therefore, no quantitative estimates of regional or local construction emissions are needed. However, specific measures to control dust and particulates would be incorporated into proposed Project specifications. These measures are identified under Avoidance, Minimization, and/or Mitigation Measures.

### Construction Odor

Odors during construction could be generated by diesel-fueled construction equipment, haul trucks, and asphalt paving. However, these odors would be temporary, would disperse rapidly with distance from the source, and would not affect a substantial number of people off site.

### Construction Toxic Air Contaminants

Proposed construction activities would result in short-term emissions of DPM from off-road heavy-duty diesel equipment exhaust and diesel-fueled haul trucks. DPM was identified as a Toxic Air Contaminant (TAC) by ARB in 1998. Meaningful potential health effects of DPM (i.e. potential carcinogenesis) occur over long-term exposures, generally assessed over a period of 30 years. Construction of the proposed Project would occur over a much shorter time period (18 months). Also, use of heavy equipment would be temporary, and DPM emissions would disperse rapidly with distance from the source. Construction-related TAC emissions would therefore not expose sensitive receptors to substantial concentrations of TACs.

### Construction Conformity

Proposed construction activities will not last more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

### Naturally Occurring Asbestos

According to the report "A General Location Guide for Ultramafic Rocks in California-Area Likely to Contain Naturally Occurring Asbestos (NOA)" (CDC 2000), NOA is not typically found in the geological formations present the coastal portion of San Diego County, which includes the proposed Project site. Thus, hazardous exposure to asbestos-containing serpentine materials would not be a concern with the proposed Project.

### Aerially Deposited Lead (ADL)

Lead is normally not an air quality issue for construction of transportation projects unless the project involves disturbance of soils containing high levels of ADL, or painting or modification of structures with lead-based coatings. An ADL study was conducted for the proposed Project; the study included collecting 80 soil samples for lead along the SB and NB on- and off-ramps connecting I-805 to Palm Avenue. The study concluded that excavated soil in the proposed Project area could be reused onsite or disposed of as non-hazardous waste with respect to lead. Also, lead concentrations were below the residential and commercial land use California Human Health Screening Levels and within the published background range. Therefore, air quality impacts due to aerially-deposited lead would not be expected.

### **Cumulative Impacts**

The analysis of proposed Project impacts to regional air quality, as performed by SANDAG and the Air Pollution Control District (APCD) in conjunction with the RTP and RTIP process, is a cumulative analysis. Neither Build Alternative would cause air quality to degrade because the design concept and scope of the proposed Project is consistent with the Project description in the 2050 RTP, the 2018 RTIP, and the assumptions in SANDAG's regional emissions analysis. Therefore, cumulative impacts are not anticipated for air quality.

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, air quality could worsen in the project area in the case of the No Build Alternative due increases in traffic and a lack of relief in congestion.

### **Avoidance, Minimization, and/or Mitigation Measures**

The SDAPCD does not have quantitative emissions limits for proposed construction activities, nor for long-term emissions that may result from increased vehicle use. The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts. The two main SDAPCD rules that apply to the proposed Project are as follows:

- SDAPCD Rule 51, Nuisance, prohibits emissions that cause injury, detriment, nuisance, or annoyance to the public; and
- SDAPCD Rule 55, Fugitive Dust Control, which restricts the emissions of fugitive dust during demolition and proposed construction activities.

The proposed Project is required to comply with these rules, and compliance will be incorporated into proposed Project specifications and procedures.

No adverse air quality impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-9.01. Construction air emissions would be short-term, i.e., less than five years. Further, implementing the following measures would minimize the temporary air quality impacts from construction;

- Minimize land disturbance;
- Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the proposed Project work areas;
- Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes;
- Cover all trucks hauling dirt when traveling at speeds greater than 15 miles per hour;
- Stabilize the surface of dirt piles if not removed within two days;

- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads;
- Minimize unnecessary vehicular and machinery activities;
- Sweep paved streets at least once per day to remove dirt that has been carried on to the roadway;
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities; and
- Remove unused material.

The following measures would be incorporated into the proposed Project to minimize exposure to diesel particulate emissions:

- Locate construction equipment, truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density; and
- Construction equipment must be maintained in good working condition consistent with manufacturer's specifications.

### ***Climate Change***

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. There have been requirements set forth in California legislation and executive orders on climate change, thus the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the proposed Project.

## **2.2.7 Noise**

### **Regulatory Setting**

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

#### 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 proposed Project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 Code of Federal Regulations Part 772 (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations [CFR] 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table (**Table 2.2.6**) lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

**Table 2.2.6 Noise Abatement Criteria (NAC)**

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq (Equivalent Sound Level [h])	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B <sup>1</sup>	67 (Exterior)	Residential.
C <sup>1</sup>	67 (Exterior)	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.
<sup>1</sup> Includes undeveloped lands permitted for this activity category		

**Figure 2.2.5** 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.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

**Figure 2.2.5**

**Noise Levels of Common Activities**

According to Caltrans’s *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the proposed Project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the proposed Project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the proposed Project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the proposed Project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the proposed Project.

Caltrans’s *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction for all impacted receptors in the future noise levels must be achieved for an abatement to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. Additionally, a noise reduction of at least 7 dBA must be achieved at one or more benefited receptors for an abatement measure to be considered reasonable. The reasonableness determination requires engineering judgement in arriving at a decision to construct noise abatement measures. The overall reasonableness of noise abatement is determined by the



noise reduction design goal, the cost of noise abatement, and the viewpoints of benefited receptors. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance and the cost per benefited residence.

### **Affected Environment**

This section is based on information provided in the "Noise Study Report" (NSR) dated February 22, 2016 and the "Preliminary Noise Abatement Decision Report" (NADR) dated March 30, 2017.

The NSR assesses the proposed Project's potential noise impacts by evaluating the impacts the proposed Project would have on noise receptors within the proposed Project area. The NADR presents the preliminary noise abatement decision as required by Caltrans Traffic Noise Analysis Protocol (May 2011).

The proposed Project location was divided into the four quadrants of the I-805/Palm Avenue Interchange for analysis in the NSR. **Figure 2.2.6**, **Figure 2.2.7**, and **Figure 2.2.8** show the location of the quadrants and receptors. Although all developed land uses are evaluated in this analysis, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, the analysis focuses on locations with defined outdoor activity areas, such as residential backyards, common use areas at multi-family residences, and parks.

The southwest quadrant (**Figure 2.2.6**) is bounded by the I-805 South on-ramp and Palm Avenue and encompasses residential and park land uses including playground and active sports areas. This quadrant is represented by receptors R-1 through R-12 at single family residences on four cul-de-sacs extending eastward from Fuchsia Lane: Bayberry, El Cedro, Zinnia and Crabapple Courts. Also represented in the southwest quadrant are three receptors in Palm Ridge Neighborhood Park. Receptors for parks and recreation areas must be located within the park or recreation area boundary for each area with a discrete outdoor activity (trails, picnic areas, sporting fields, etc.). Three receptors have therefore been determined at Palm Ridge Park. Receptor R-13 is at the playground on the slope above the I-805 South on-ramp, R-14 is at the basketball court on the slope above the I-805 South on-ramp, and R-15 is at the baseball field near Palm Avenue.

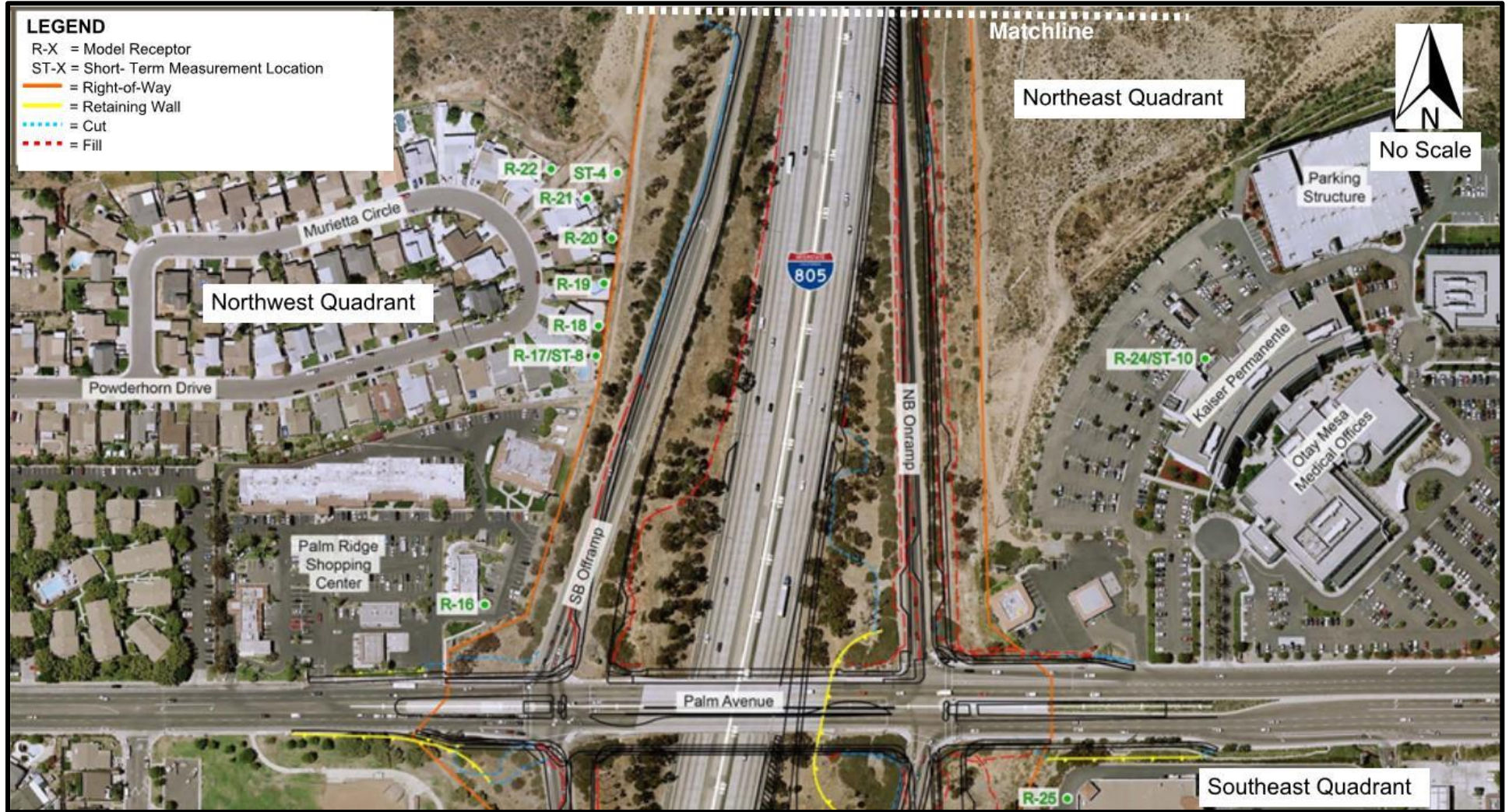
The southeast quadrant (**Figure 2.2.6** and **Figure 2.2.7**) is bounded by the I-805 North off-ramp and Palm Avenue and encompasses retail land uses. This quadrant is represented by receptor R-25 at the Vons store on Palm Avenue and receptor R-26 at the Palm Promenade shopping center.

The northwest quadrant (**Figure 2.2.7**) is bounded by the I-805 South off-ramp and Palm Avenue and encompasses commercial and residential land uses. This quadrant is represented by receptor R-16 at the Kentucky Fried Chicken in Palm Ridge Shopping Center, and receptors R-17 through R-22 at single family residences along Powderhorn Drive and Murrieta Circle.

The northeast quadrant (**Figure 2.2.7** and **Figure 2.2.8**) is bounded by the I-805 North on-ramp and Palm Avenue, and encompasses multi-family residential and medical facility land uses as well as vacant land. This quadrant is represented by receptor R-23 at the River Edge Terrace apartments community pool, and receptor R-24 at the Kaiser Permanente Otay Mesa medical facility outdoor patio.







**Figure 2.2.7**  
**Noise Monitoring and Receptor Locations (Northwest, Northeast, and Southeast Quadrants)**





Figure 2.2.8  
Noise Monitoring and Receptor Locations (Northeast Quadrant)

**Table 2.2.7 Existing and Predicted Future Noise Levels and Abatement Feasibility Analysis**

Receptor # and Location	Existing Noise Level (dBA Leq)	Predicted Noise Level without Project (dBA Leq)	Predicted Noise Level with Project Alt 1 + IV (dBA Leq)	Predicted Noise Level with Project Alt 2 + IV (dBA Leq)	Noise Impact Requiring Abatement Consideration	Abatement Feasibility Analysis for Both Build Alternatives			Abatement Feasible?
						Wall Height Needed for minimum 5 dBA reduction (feet)	Noise Level with Wall at Height Listed (dBA Leq)	Noise Reduction with Wall at Height Listed (dBA)	
R-1/ST-24388 Bayberry Ct	66	66	66	66	Yes	16+	62	4	No
R-2 4396 Bayberry Ct	65	67	67	67	Yes	14	62	5	Yes
R-3 4393 Bayberry Ct	64	66	66	66	Yes	16+	62	4	No
R-4/ST-9 4391 El Cedro Ct	65	69	69	69	Yes	10	64	5	Yes
R-5 4396 El Cedro Ct	67	69	69	69	Yes	10	64	5	Yes
R-6 4390 El Cedro Ct	75	77	77	77	Yes	6	68	9	Yes
R-7 4397 Zinnia Ct	71	73	73	73	Yes	8	66/67*	7/6*	Yes
R-8 4394 Zinnia Ct	69	71	71	71	Yes	8	66	5	Yes
R-9/ST-1 4388 Zinnia Ct	73	77	76	76	Yes	6	66	10	Yes
R-10 4397 Crabapple Ct	69	71	71	71	Yes	8	66	5	Yes
R-11 4396 Crabapple Ct	67	69	68	68	Yes	10	62	6	Yes
R-12 4392 Crabapple Ct	71	73	72	72	Yes	8	65	7	Yes
R-13/ST-5 Palm Ridge Park Playground	71	75	73	73	Yes	6	66	7	Yes
R-14/ST-6 Palm Ridge Park Basketball Court	62	64	63	63	No	N/A	N/A	N/A	N/A
R-15/ST-3 Palm Ridge Park Baseball Field	65	65	65	65	No	N/A	N/A	N/A	N/A
R-16 KFC 4380 Palm Ave	64	65	64	64	No	N/A	N/A	N/A	N/A
R-17/ST-8 4439 Powderhorn Drive	58	58	59	59	No	N/A	N/A	N/A	N/A
R-18 4490 Murietta Circle	57	59	59	59	No	N/A	N/A	N/A	N/A
R-19 4480 Murietta Circle	59	60	61	60	No	N/A	N/A	N/A	N/A
R-20 4470 Murietta Circle	61	63	64	63	No	N/A	N/A	N/A	N/A
R-21 4460 Murietta Circle	60	61	62	61	No	N/A	N/A	N/A	N/A
R-22 4450 Murietta Circle	58	60	60	59	No	N/A	N/A	N/A	N/A
R-23 River Edge Terrace Apts. Community Pool 4805 Wind Surf Way	57	59	59	58	No	N/A	N/A	N/A	N/A
R-24/ST-10 Kaiser Permanente Otay Mesa Patio 4650 Palm Ave	60	62	61	60	No	N/A	N/A	N/A	N/A
R-25 Vons 620 Dennery Road	65	67	69	66	No	N/A	N/A	N/A	N/A
R-26 AMC Palm Promenade 770 Dennery Road	74	75	75	75	No	N/A	N/A	N/A	N/A

Source: NSR 2016

\*Results for Alt1 + IV / Alt 2 + IV

R = Receptor ST = Short Term N/A Not Applicable



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## Environmental Consequences

### Traffic Noise

FHWA defines a Type I Project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment of the highway, adds through-traffic lane(s), or includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high occupancy toll (HOT) lane, bus lane, or truck climbing lane. The proposed Project is considered to be a Type I Project as defined by FHWA because each of the two Build Alternatives includes the addition of a new EB through-traffic lane along Palm Avenue within the I-805/Palm Avenue Interchange.

Ten short-term (ST) measurement locations were selected to represent each major developed area within the proposed Project area, at locations where traffic noise impacts are expected to be the worst. Eight of the ST measurement locations coincide with modeled receptors. All ST locations are shown on **Figure 2.2.6**, **Figure 2.2.7**, and **Figure 2.2.8**. Measurements were taken over a 15- or 20-minute period at each site. A long-term (LT) measurement location was selected at the site of receptor R-12 in the backyard of a residence on Crabapple Court overlooking the I-805 South on-ramp to capture the diurnal traffic noise level pattern in the proposed Project area. The long-term sound level measurements were collected over one consecutive 24-hour period.

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5. Traffic noise was evaluated under existing conditions, design-year (2040) conditions for the No Build Alternative, and design-year (2040) conditions with each Build Alternative. The highest average traffic volumes on I-805 are predicted to occur during the PM peak hour; therefore PM peak hour traffic volumes were used in the model. Existing and predicted noise levels for each Build Alternative and the No Build Alternative are presented in **Table 2.2.7**. Each receptor was evaluated for abatement when future predicted noise levels would approach within one dBA or exceed the NAC for the receptor site's land use, or substantially increase (by 12 dBA) above existing noise levels.

As shown in **Table 2.2.7**, traffic noise levels in the design year would approach or exceed the NAC of 67 dBA at 13 receptors in the southwest quadrant for the No Build Alternative and both Build Alternatives. Affected receptors R-1 through R-12 are single-family residences and receptor R-13 is the playground at Palm Ridge Neighborhood Park. Noise abatement must be considered at these locations. A summary of the abatement feasibility analysis for these 13 receptors is presented in **Table 2.2.7**. Soundwall heights from 6 feet to 16 feet were considered in the abatement feasibility analysis in the NSR. Traffic noise impacts are not predicted for any other receptors in the southwest quadrant or in the other three quadrants. Therefore, abatement does not need to be considered at these receptors. A substantial increase of 12 dBA would not occur at any receptor for any alternative.

### Construction Noise

During construction of the proposed project, noise from proposed construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise associated with construction is controlled by Caltrans Standard Specifications Section 14-8.02, "Noise Control," which states the following:

- Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

**Table 2.2.8** summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance.

**Table 2.2.8 Construction Equipment Noise**

<b>Equipment</b>	<b>Maximum Noise Level (dBA at 50 feet)</b>
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 2006

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise.

### ***Cumulative Impacts***

Neither Build Alternative would cause noise conditions to degrade because noise levels with the proposed Project would either be less than, the same, or no greater than 2 decibels higher than the No Build Alternative noise levels. A change of 3 decibels is barely perceptible by the human ear. Therefore, cumulative impacts are not anticipated for noise.

### ***No Build Alternative***

Under the No Build Alternative, the modeled noise receptors experience an increase in future noise levels from 0 to 4 decibels compared to existing noise levels. A change of 3 decibels is barely perceptible by the human ear. The No Build Alternative proposes no improvements. Therefore, no impacts to noise would occur.

### **Avoidance, Minimization, and/or Abatement Measures**

Noise abatement was evaluated for preliminary feasibility in the NSR (2016) at the 13 impacted receptors in the form of an approximately 1,400-foot-long noise barrier wall located at the top of the slope parallel to the I-805 South on-ramp, within private property and outside of Caltrans Right-of-Way. This wall is identified as Noise Barrier NB-1 on **Figure 2.2.6**. Various wall heights in the range of 6 to 16 feet were evaluated in 2-foot increments. As summarized in **Table 2.2.7**, a variable height noise barrier is preliminarily considered feasible to benefit up to 11 receptors, based on FHWA/Caltrans Noise Abatement Criteria. Abatement of impacted receptors R-1 and R-3 was not found to be acoustically feasible for any of the noise barrier wall heights evaluated.

The NSR also determined that noise barrier wall NB-1 meets Caltrans acoustical design goal of at least 7 dBA reduction in noise at impacted receptors R-6, R-9, and R-13 (9 dBA, 10 dBA, and 7 dBA noise reduction, respectively) for a 6-foot-high wall for both Build Alternatives.

The NADR (2017) documents the decision of the overall feasibility and reasonableness of providing abatement measures by analyzing in more detail and estimating the cost to construct noise barrier NB-1. Cost considerations for determining noise abatement reasonableness are based on a 2016 allowance per benefited receptor. If the abatement can be constructed for a reasonable cost allowance, the preliminary reasonableness decision will be to provide abatement. The 2016 cost allowance per benefited receptor is \$80,000.

The NADR estimated the cost for two versions of noise barrier NB-1 that was preliminarily determined to be feasible in the NSR. Both versions would be located along the top of cut slope adjacent to the I-805 South on-ramp, within private property (backyards). The wall height would vary from 8 to 14 feet for either version. Details of the cost estimate are presented in the NADR.

NB-1 Alternative A would be 1,445 feet long. It would extend from receptor R-1 through receptor R-13, including the frontage of Palm Ridge Neighborhood Park playground (**Figure 2.1.9**). NB-1 Alternative A would benefit 11 of the 13 receptors identified as needing consideration of abatement, including R-13 in the park. Receptors R-1 and R-3 would not be benefitted because even a 16-foot-high wall would not achieve a 5-dBA noise reduction. A minimum of 5 dBA noise reduction in future noise levels with either Build Alternative would be achieved for the 11 benefitted receptors, and the future noise levels with abatement would be below the NAC. The reasonable total cost allowance for this wall would be \$880,000. The total estimated cost to build noise barrier NB-1 Alternative A, including easements, is \$1,648,323. The estimated cost of NB-1 Alternative A with all easements exceeds the reasonable allowance by 87 percent. Assuming easements would be provided at no cost, the estimated cost of NB-1 Alternative A is \$1,102,000, which exceeds the reasonable allowance by 25 percent. Construction of noise barrier wall NB-1 Alternative A is feasible but not reasonable. Therefore, NB-1 Alternative A is not recommended for construction. **Table 2.2.9** shows the existing noise level at each receptor covered in NB-1 Alternative A.

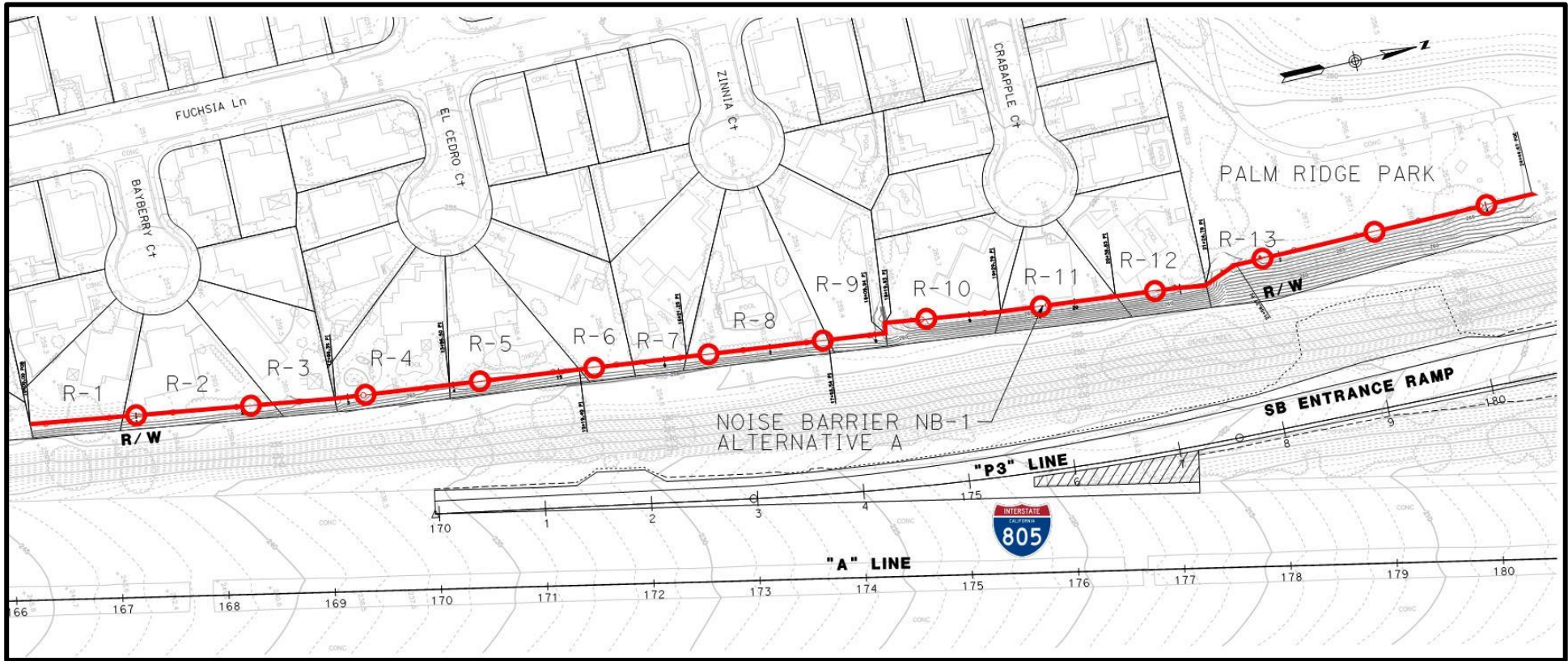
NB-1 Alternative B would be 1,233 feet long. It would start at receptor R-1 and wrap around receptor R-12 property (**Figure 2.2.9**). NB-1 Alternative B would benefit 10 of the 13 receptors identified as needing consideration of abatement. Receptor R-13 in the park and residential receptors R-1 and R-3 would not be benefitted. A minimum of 5 dBA noise reduction in future noise levels with either Build Alternative would be achieved for the 10 benefitted receptors, and the future noise levels with abatement would be below the NAC. The reasonable total cost allowance for this wall would be \$800,000. The total estimated cost to build noise barrier NB-1 Alternative B, including easements, is \$1,538,945. The estimated cost of NB-1 Alternative B with all easements exceeds the reasonable allowance by 92 percent. Assuming easements would be provided at no cost, the estimated cost of NB-1 Alternative B is \$967,000, which exceeds the reasonable allowance by 21 percent. Construction of noise barrier wall NB-1 Alternative B is feasible but not reasonable. Therefore, NB-1 Alternative B is not recommended for construction. A reassessment of the soundwall reasonableness was conducted using updated 2018 base cost allowance, and it was concluded the soundwall remains unreasonable.

**Table 2.2.9** shows the existing noise level at each receptor covered in NB-1 Alternative B.

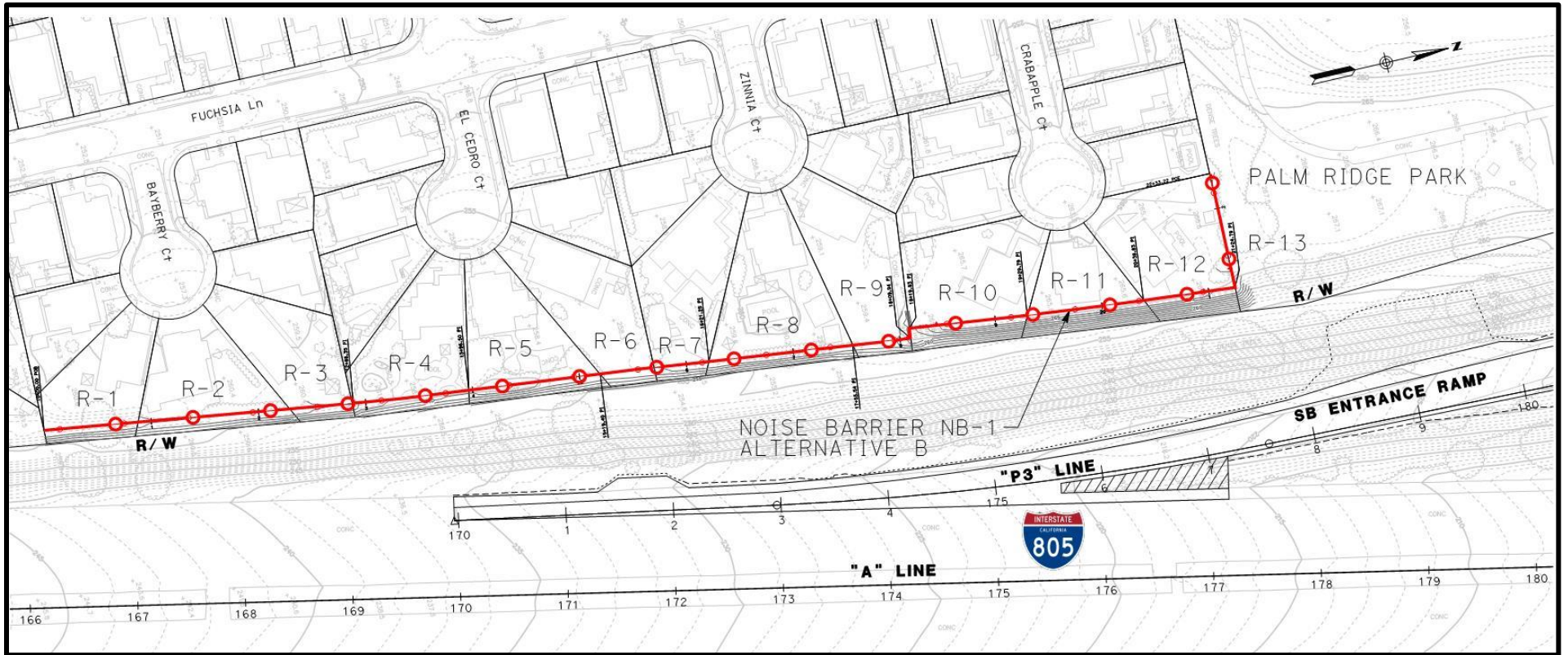
**Table 2.2.9 Receptors Benefitted by Soundwall Alternatives**

<b>NB-1 Alternative A</b>		<b>NB-1 Alternative B</b>	
<b>Receptor</b>	<b>Existing Noise Levels (dBA)</b>	<b>Receptor</b>	<b>Existing Noise Levels (dBA)</b>
2	65	2	65
4	65	4	65
5	67	5	67
6	75	6	75
7	71	7	71
8	69	8	69
9	73	9	73
10	69	10	69
11	67	11	67
12	71	12	71
13	71		





**Figure 2.2.9**  
**Alignment of Noise Barrier NB-1 Alternative A**



**Figure 2.2.10**  
**Alignment of Noise Barrier NB-1 Alternative B**

## CEQA Noise Analysis

To determine if a noise impact is significant under CEQA, the baseline (existing) noise level is compared to the future noise level with the Build Alternatives. The CEQA noise analysis is completely independent of the NEPA 23 CFR 772 analysis, which is centered on noise abatement criteria. Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected and the absolute noise level.

**Table 2.2.10** presents existing noise levels (baseline), future noise levels for each Build Alternative, and the differences between existing and future noise levels. Except for two receptor locations, the differences between existing and future noise levels are from 0 to 3 dBA. These increases would be barely perceptible to the human ear. At receptor R-4 for both Build Alternatives and receptor R-25 for Alternative 1 + IV, the difference is 4 dBA, which is only slightly higher than the perceptible level. In addition, receptor R-4 is a residential backyard that faces the freeway and receptor R-25 is the Vons store, so both receptors are in already noisy environments. Therefore, under CEQA, no significant noise impact would occur as a result of the proposed Project and no mitigation is required.

**Table 2.2.10 Existing Versus Future Noise Levels**

Receptor # and Location	Existing Noise Level (dBA Leq)	Predicted Noise Level with Project Alt 1 + IV (dBA Leq)	Difference Between Existing and Future Alt 1 + IV (dBA)	Predicted Noise Level with Project Alt 2 + IV (dBA Leq)	Difference Between Existing and Future Alt 2 + IV (dBA)
R-1/ST-2 4388 Bayberry Ct	66	66	0	66	0
R-2 4396 Bayberry Ct	65	67	2	67	2
R-3 4393 Bayberry Ct	64	66	2	66	2
R-4/ST-9 4391 El Cedro Ct	65	69	4	69	4
R-5 4396 El Cedro Ct	67	69	2	69	2
R-6 4390 El Cedro Ct	75	77	2	77	2
R-7 4397 Zinnia Ct	71	73	2	73	2
R-8 4394 Zinnia Ct	69	71	2	71	2
R-9/ST-1 4388 Zinnia Ct	73	76	3	76	3
R-10 4397 Crabapple Ct	69	71	2	71	2
R-11 4396 Crabapple Ct	67	68	1	68	1
R-12 4392 Crabapple Ct	71	72	1	72	1
R-13/ST-5 Palm Ridge Park Playground	71	73	2	73	2
R-14/ST-6 Palm Ridge Park Basketball Court	62	63	1	63	1
R-15/ST-3 Palm Ridge Park Baseball Field	65	65	0	65	0
R-16 KFC 4380 Palm Ave	64	64	0	64	0

Table Continued on Next Page

(Continued) Table 2.2.10 Existing Versus Future Noise Levels

Receptor # and Location	Existing Noise Level (dBA Leq)	Predicted Noise Level with Project Alt 1 + IV (dBA Leq)	Difference Between Existing and Future Alt 1 + IV (dBA)	Predicted Noise Level with Project Alt 2 + IV (dBA Leq)	Difference Between Existing and Future Alt 2 + IV (dBA)
R-17/ST-8 4439 Powderhorn Drive	58	59	1	59	1
R-18 4490 Murietta Circle	57	59	2	59	2
R-19 4480 Murietta Circle	59	61	2	60	1
R-20 4470 Murietta Circle	61	64	3	63	2
R-21 4460 Murietta Circle	60	62	2	61	1
R-22 4450 Murietta Circle	58	60	2	59	1
R-23 River Edge Terrace Apts. Community Pool 4805 Wind Surf Way	57	59	2	58	1
R-24/ST-10 Kaiser Permanente Otay Mesa Patio 4650 Palm Ave	60	61	1	60	0
R-25 Vons 620 Dennerly Rd	65	69	4	66	1
R-26 AMC Palm Promenade 770 Dennerly Rd	74	75	1	75	1

Source: NSR 2016

R = Receptor ST = Short Term

## 2.3 BIOLOGICAL ENVIRONMENT

### 2.3.1 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 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.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the *Threatened and Endangered Species* **Section 2.3.4**. No jurisdictional waters exist within the Project footprint.

#### Affected Environment

This section is based on information provided in the "Interstate 805/Palm Avenue Interchange Improvements Project Natural Environment Study, Including Focused Studies for Special-Status Species Interstate 805 and Palm Avenue San Diego County, California" (NES), dated February 28, 2017.

The NES analyzed a general Biological Study Area (BSA) that is defined as the proposed Project boundary of the combined Build Alternatives. The general BSA was used for mapping of vegetation communities, documentation of plant species present, and limited wildlife observations. The general BSA includes all areas between the I-805 North and south on- and

off-ramps and the Palm Avenue bridge and approaches. Staging areas include the “gore” area located between the I-805 main lanes and the on- and off-ramps.

### ***Biological Communities within the General Biological Study Area***

Within the entire 67.5-acre general BSA, three vegetation communities and land cover types were identified: ornamental, disturbed ornamental, and Diegan coastal sage scrub (**Figure 2.3.1**). Of these, only Diegan coastal sage scrub is considered a sensitive biological community and discussed further in this section.

Diegan coastal sage scrub occurs within the general BSA as a small, linear patch of habitat located on the hillside next to the I-805 North on-ramp. Diegan coastal sage scrub is characterized by low, soft to woody subshrubs that are most active in winter and early spring. This approximately 0.3-acre patch is dominated by coastal sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and jojoba (*Simmondsia chinensis*). This vegetation community is considered sensitive.

### ***Wildlife Movement Corridors***

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations. Wildlife movement corridors are considered sensitive by resource and conservation agencies.

No wildlife corridors occur within the general BSA. The nearest regional wildlife corridor occurs in association with the Otay River located approximately 500 feet north of the northern limit of the proposed Project. Undeveloped hillsides located to the east of the general BSA may serve as a corridor for movement by coastal California gnatcatcher and other birds observed.

## **Environmental Consequences**

### **Impacts to Diegan Coastal Sage Scrub**

Diegan coastal sage scrub is considered a regionally rare community in southern California. Coastal sage scrub is a plant community of concern because its extent has been drastically reduced during recent decades primarily due to residential development in the coastal foothills of southern California. Vegetation of this type can provide potential habitat for a number of special-status species, including coastal California gnatcatcher.

Disturbed Diegan coastal sage scrub in the general BSA occurs as a narrow strip of habitat along the eastern limit of the I-805 North on-ramp. It is possible that direct impacts to this community can be avoided, but this cannot be determined until construction begins. For purposes of this environmental document, as currently designed, both Build Alternatives are assumed to result in temporary impacts to 0.3-acre of Diegan coastal sage scrub. No permanent impacts to Diegan coastal sage scrub within the general BSA are anticipated.

Due to the narrow width and proximity to developed areas, the Diegan coastal sage scrub community located within the general BSA is considered to be of low ecological value. The small area of Diegan coastal sage scrub habitat located within the general BSA is contiguous with Diegan coastal sage scrub habitat outside of the general BSA. The proposed Project would not result in direct impacts to Diegan coastal sage scrub beyond the limits of the general BSA.



### Regional Conservation Plans

The Build Alternatives for the proposed Project are within the boundaries of the City of San Diego's MSCP. The MSCP is a conservation program designed to facilitate the implementation of a regional habitat preserve by coordinating proposed Project impacts and mitigation while allowing the issuance of "take" permits for sensitive upland species at the local level. This habitat preserve is known as the Multi-Habitat Planning Area (MHPA), and lands within the MHPA have been designated for conservation. Various jurisdictions, including the City of San Diego, have developed MSCP subarea plans to establish guidelines for the implementation of their respective preserve areas which are included in the regional MHPA. The proposed Project alignment is located in the Southern Area of the City of San Diego's MSCP subplan area. While Caltrans is not a signatory in the City of San Diego's MSCP, Caltrans strives to be consistent with the MSCP guidelines to avoid cumulative impacts to wildlife resources.

### ***Cumulative Impacts***

Neither Build Alternative would incrementally degrade natural communities because disturbed Diegan coastal sage scrub would be protected (or impacts would be minimized/mitigated) by measures described below in avoidance, minimization and /or mitigation measures.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to natural communities would occur.



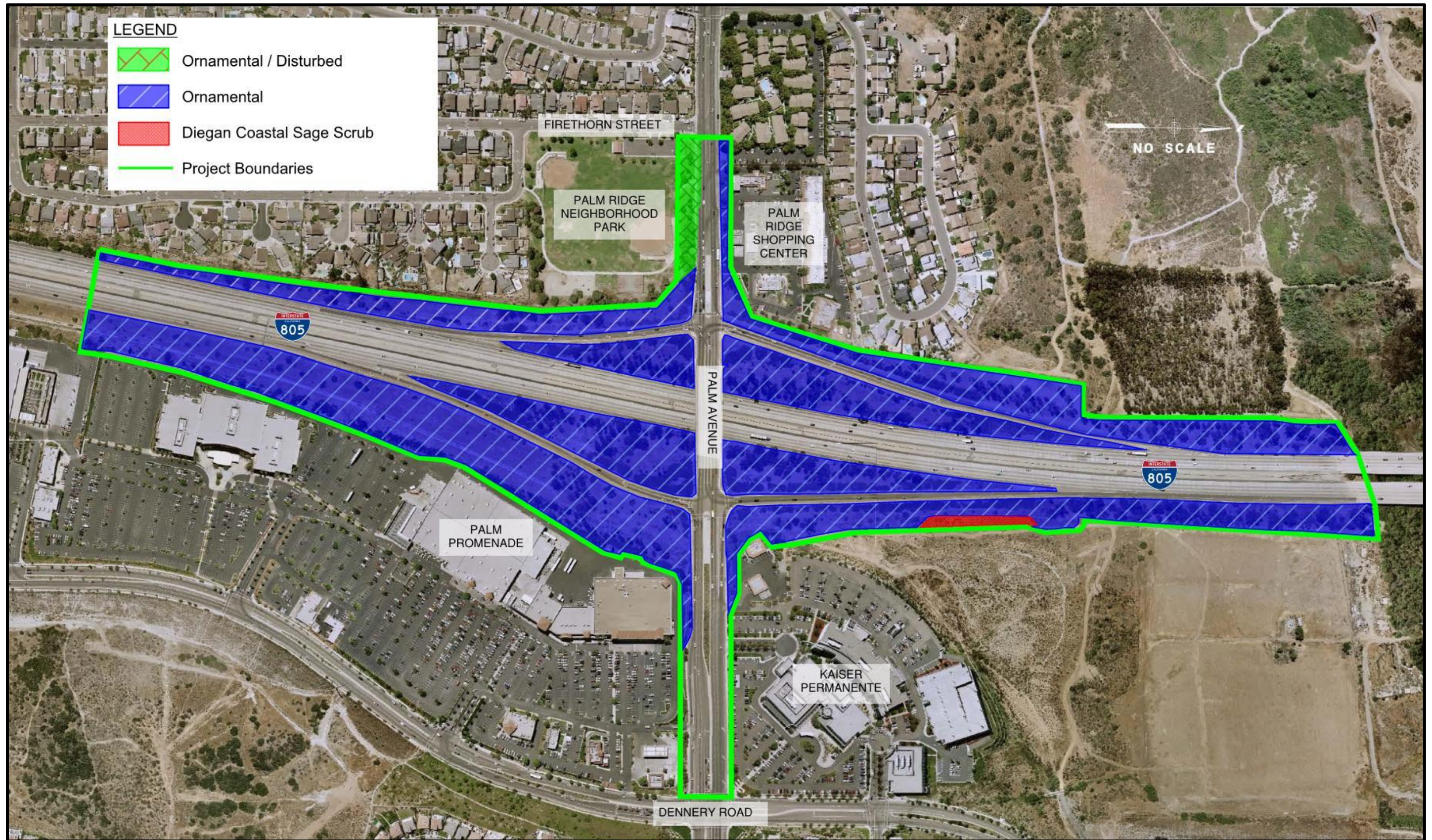


Figure 2.3.1  
Vegetation within the General Biological Study Area



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## **Avoidance, Minimization, and/or Mitigation Measures**

Because the strip of Diegan coastal sage scrub is located along the eastern limit of the general BSA, it is possible that direct impacts to this community can be avoided. This will be determined during construction. Standard proposed Project avoidance and minimization procedures for either Build Alternative include the following:

- Delineation of the proposed Project footprint prior to construction in order to avoid encroachment into surrounding sensitive area; and
- Monitoring by a qualified biologist during proposed construction activities for the duration of the proposed Project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat outside of the proposed Project footprint.

If the 0.3-acre of disturbed Diegan coastal sage scrub is directly and temporarily impacted, mitigation would be accomplished through revegetation of the 0.3-acre temporarily disturbed during construction. The 0.3-acre disturbance footprint would be hydroseeded with a Diegan coastal sage scrub seed mix that includes, but is not limited to, coastal sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), San Diego sunflower (*Bahiopsis laciniata*) and California buckwheat (*Eriogonum fasciculatum*). Maintenance would include short-term (e.g., 24 months) weed control during establishment.

No wildlife corridors occur within the general BSA. The proposed Project would not impact any migratory fish species. As only 0.3-acre of disturbed Diegan coastal sage scrub is anticipated, the proposed Project is not expected to impede the use of native wildlife nursery sites.

## **CEQA Considerations**

Both of the Build Alternatives for the proposed Project would involve potential temporary impacts to a strip of Diegan coastal sage scrub located along the eastern limit of the proposed Project. If the 0.3-acre of disturbed Diegan coastal sage scrub cannot be avoided and is directly and temporarily impacted during construction, there would be an impact under CEQA. Mitigation would be accomplished through revegetation of the 0.3-acre temporarily disturbed during construction, as discussed above. This mitigation measure would reduce construction-related impacts to disturbed Diegan coastal sage scrub to less than significant under CEQA. Although Caltrans is not a participant in the City of San Diego's MSCP, Caltrans strives to be consistent with the guidelines to avoid cumulative impacts to wildlife resources. Land uses adjacent to the MHPA will be managed to ensure minimal impacts by adhering to the following guidelines:

- Temporary construction areas and roads, staging areas, or permanent access roads will not disturb existing habitat unless determined to be unavoidable; temporary habitat disturbance of a small area of coastal sage scrub will be minimized by restoration and mitigation of the disturbed area after proposed Project completion;
- All developed and paved areas will prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes; this will be accomplished using Caltrans storm water BMPs; and
- Uses in the MHPA will be designed to minimize noise impacts; a noise study conducted at the locations of detected vireos and gnatcatchers concluded that construction and operation of the proposed Project would not result in indirect impacts to these special status species associated with noise.

## 2.3.2 Plant Species

### Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the *Threatened and Endangered Species* **Section 2.3.4** in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

### Affected Environment

In addition to plant species considered to have special status by federal or state agencies or by special interest groups, the City also considers a list of narrow endemic plant species as sensitive biological resources. In addition, habitats that support a listed species, wetlands and wetland buffers are also considered to be sensitive biological resources.

A complete list of plant species detected in the general BSA is provided in Appendix A of the NES. Thirty-six plant species were found within the general BSA. Eighty-eight special-status plant species are known to occur within the region. A list of these species and vegetation communities, including all MSCP covered species and City of San Diego narrow endemic species, as well as their requirements and likelihood of occurrence within the general BSA, is provided in Appendix C of the NES.

During the general biological surveys conducted on November 10, 2010 and March 15, 2015, the general BSA was assessed for the potential to support special-status plant species. Further special-status plant surveys were determined to not be required due to the low suitability of these areas and their low potential to support special-status plant species.

### Environmental Consequences

Neither Build Alternative for the proposed Project would result in direct, indirect or cumulative impacts to special-status plant species because such species are not present within the general BSA.

### Cumulative Impacts

Neither Build Alternative would incrementally impact special-status plant species because the proposed Project would not impact these biological resources. Therefore, cumulative impacts are not anticipated for special-status plant species.



### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts to plant species would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

Neither Build Alternative for the proposed Project would result in impacts to special-status plant species. Therefore, avoidance, minimization, and mitigation measures are not necessary. Neither Build Alternative would have a substantial adverse effect on federally protected wetlands as no jurisdictional waters or wetlands are located within the general BSA; therefore, avoidance, minimization, and mitigation measures are not necessary.

### **2.3.3 Animal Species**

#### **Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the *Threatened and Endangered Species* **Section 2.3.4** below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act;
- Migratory Bird Treaty Act; and
- Fish and Wildlife Coordination Act.

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act;
- Sections 1600 – 1603 of the California Fish and Game Code; and
- Sections 4150 and 4152 of the California Fish and Game Code.

#### Section 3503 of the California Department of Fish and Wildlife Code

Section 3503 of the CDFW Code makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 affords this protection to Falconiformes and Strigiformes in particular.

#### Fully Protected Species Statute (CDFW Code Section 4700)

The State of California first began to designate species as “fully protected” prior to the creation of CESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CDFW Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore,

CDFW prohibits any state issuing incidental take permits for fully protected species, except for necessary scientific research.

### **Affected Environment**

Fourteen special-status wildlife species are known to occur within the region. A list of these species, as well as their requirements and likelihood of occurrence within the general BSA, is provided in Appendix C of the NES. None of these species were found within the general BSA.

Six wildlife species were found within the general BSA. It should be noted that the general BSA occurs immediately adjacent to I-805 and Palm Avenue and is not conducive to wildlife use. Wildlife species observed within the general BSA are the following:

- mourning dove (*Zenaida macroura*);
- rock dove (*Columba livia*);
- American crow (*Corvus brachyrhynchos*);
- Anna's hummingbird (*Calypte anna*);
- black phoebe (*Sayornis nigricans*); and
- Botta's pocket gopher (*Thomomys bottae*).

None of the wildlife species found within the general BSA are listed or proposed for listing under the federal or state Endangered Species Act, or have any other type of special status.

### **Environmental Consequences**

#### Impacts to Species Covered by the Migratory Bird Treaty Act

Impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA) and similar provisions of the CDFW Code can occur if work is conducted during the breeding season (February 1 to August 31). Raptors and other early nesting species such as hummingbirds have potential to initiate nests as early as January, but in general, the peak nesting season is February through August. All vegetation, native or non-native, provides habitat that may be used by nesting birds. However, impacts of both of the Build Alternatives for the proposed Project would be avoided by conducting avoidance and minimization measures described below.

#### **Cumulative Impacts**

Neither Build Alternative would incrementally impact non-special status animal species. Neither Build Alternative would cause nesting birds protected by the MBTA and similar provisions of the CDFW Code to degrade because protection measures would be implemented as described below in avoidance, minimization, and /or mitigation measures.

#### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts to animal species would occur.

## **Avoidance, Minimization, and/or Mitigation Measures**

Direct impacts to nesting birds protected by the MBTA and similar provisions of the CDFW Code from construction of either of the Build Alternatives for the proposed Project would be avoided by implementation of the following measures as part of the proposed Project:

- Removal of vegetation will occur outside of the breeding season for birds. However, if a preconstruction nesting bird survey determines that nesting birds do not occur in the vicinity of the site (typically 300 feet for passerine birds and 500 feet for raptors), removal of vegetation can occur within the breeding season for avian species.
- If vegetation removal is to occur from January 15 to August 31, a preconstruction nesting bird survey for raptors and other nesting species will be conducted. If a nest is found, methods will be implemented to avoid impacts. This will consist of a no-work buffer zone placed around the nest until the adults are no longer using it or the young have fledged. The specific buffer width will be determined by a qualified biologist at the time of discovery. These will vary based on site conditions and type of work to be conducted.

### **2.3.4 Threatened and Endangered Species**

#### **Regulatory Setting**

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later 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 (and Caltrans, as assigned), are required to consult with the USFWS and the NOAA Fisheries Service 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 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. 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 California Endangered Species Act (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. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California 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 California 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 CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery

management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### Affected Environment

This section is based on information provided in NES, dated February 28, 2017 and the "Noise Study Report for I-805 Palm Avenue Interchange" (NSR) dated February 22, 2016.

### Species List

Appendix C of the NES includes a letter dated February 21, 2017 from the USFWS Carlsbad Fish and Wildlife Office providing a list of 18 species of USFWS concern that may occur in the proposed Project area. An updated USFWS species list was obtained on April 26, 2019 and confirmed that the species status remained unchanged and that no new species had been identified since the original list was obtained in 2017. This updated list can be found in **Appendix F** of this document. On April 16, 2019, the NOAA Fisheries Service confirmed a list of species known to be present within the Imperial Beach Quadrangle. This list can also be found in **Appendix F** of this document. No critical habitat or essential fish habitat exists within the general BSA or proposed Project area. No threatened, endangered, or other protected marine mammal species were found within the general BSA. Least Bell's vireo and coastal California gnatcatcher are the only threatened, endangered, or other protected animal species on the USFWS list confirmed present within the specific BSAs for these two species.

### Threatened or Endangered Species within the General Biological Study Area

The general BSA was assessed for the potential to support special-status plant species. Special-status plant surveys were determined to not be required due to the low suitability of these areas and their low potential to support special-status plant species. No threatened and endangered plant species were found within the general BSA.

Eighteen special-status species have been identified by USFWS and two species have been identified by the NOAA Fisheries Service within the region. However, none of these species were found within the general BSA. The Project has no effect on all species listed in **Table 2.3.1**.

**Table 2.3.1 Listed Species within the General Biological Study Area**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
<u>Pacific Pocket Mouse</u>	<u><i>Peroqnathus longimembris pacificus</i></u>	<u>FE</u>
<u>California Least Tern</u>	<u><i>Sterna antillarum browni</i></u>	<u>FE</u>
<u>Coastal California Gnatcatcher</u>	<u><i>Polioptila californica</i></u>	<u>FT</u>
<u>Least Bell's Vireo</u>	<u><i>Vireo bellii pusillus</i></u>	<u>FE</u>
<u>Light-footed Clapper Rail</u>	<u><i>Rallus longirostris levipes</i></u>	<u>FE</u>
<u>Southwestern Willow Flycatcher</u>	<u><i>Empidonax traillii extimus</i></u>	<u>FE</u>
<u>Western Snowy Plover</u>	<u><i>Charadrius nivosus</i></u>	<u>FT</u>
<u>Quino Checkerspot Butterfly</u>	<u><i>Euphydryas editha quino (=E. e. wrighti)</i></u>	<u>FE</u>
<u>Riverside Fairy Shrimp</u>	<u><i>Streptocephalus woottoni</i></u>	<u>FE</u>
<u>San Diego Fairy Shrimp</u>	<u><i>Branchinecta sandiegonensis</i></u>	<u>FE</u>
<u>California Orcutt Grass</u>	<u><i>Orcuttia californica</i></u>	<u>FE</u>
<u>Otay Mesa-mint</u>	<u><i>Pogogyne nudiuscula</i></u>	<u>FE</u>
<u>Otay Tarplant</u>	<u><i>Deinandra (=Hemizonia) conjugens</i></u>	<u>FT</u>
<u>Salt Marsh Bird's-beak</u>	<u><i>Cordylanthus maritimus ssp. maritimus</i></u>	<u>FE</u>

Table Continued on Next Page

**(Continued) Table 2.3.1 Listed Species within the General Biological Study Area**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
<u>San Diego Ambrosia</u>	<u><i>Ambrosia pumila</i></u>	<u>FE</u>
<u>San Diego Button-celery</u>	<u><i>Eryngium aristulatum var. parishii</i></u>	<u>FE</u>
<u>San Diego Thornmint</u>	<u><i>Acanthomintha ilicifolia</i></u>	<u>FT</u>
<u>Spreading Navarretia</u>	<u><i>Navarretia fossalis</i></u>	<u>FT</u>
<u>Southern California Steelhead</u>	<u><i>Oncorhynchus mykiss irideus</i></u>	<u>FE</u>
<u>East Pacific Green Sea Turtle</u>	<u><i>Chelonia mydas</i></u>	<u>FT</u>
Status: Federal Endangered (FE); Federal Threatened (FT)		

Source: USFWS 2019, NOAA Fisheries Service 2019

### **Threatened or Endangered Species within Specific Biological Study Areas**

Specific BSAs were identified for focused surveys of listed species due to the potential for indirect impacts from noise associated with construction and operational traffic. An approximately 15-acre BSA straddling the Otay River located approximately 500 feet north of the northernmost extent of the proposed Project impact area was surveyed for least Bell's vireo (*Vireo bellii pusillus*). An approximately 9.5-acre area of Diegan coastal sage scrub habitat located partially within but mostly outside of the proposed Project footprint was surveyed for coastal California gnatcatcher (*Poliioptilla californica californica*).

Specific BSAs were identified for focused surveys least Bell's vireo, and coastal California gnatcatcher. Special status plant surveys were not conducted for the specific BSAs because no direct impacts would occur in these areas.

#### Least Bell's Vireo

Least Bell's vireo is federally and state listed as endangered. Focused surveys for the least Bell's vireo were conducted in 2015 on April 17 and 27, May 26, June 8, 18 and 30, and July 10, and 21. Results are mapped in **Figure 2.3.2**. Two territorial male least Bell's vireos were detected aurally and visually within the southern willow scrub habitat associated with the Otay River. One male vireo was detected during seven of the eight protocol surveys while the other was detected during five of the eight surveys. The presence of female mates was not confirmed.

Vegetation associated with the least Bell's vireo BSA in the Otay River consists of southern willow scrub, which is described as dense, broad-leaved, winter-deciduous riparian thicket dominated by several willow (*Salix*) species with scattered western cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). Plant species observed in the southern willow scrub biological community within the least Bell's vireo specific BSA include arroyo willow (*Salix lasiolepis*), narrow-leaf willow (*Salix exigua*), mule-fat (*Bacchais salicifolia*), tamarisk (*Tamarix ramosissima*), San Diego marsh-elder (*Iva hayesiana*) and poison oak (*Toxicodendron diversilobum*). This vegetation community is considered sensitive.

#### Coastal California Gnatcatcher

The coastal California gnatcatcher is federally listed as threatened. Focused surveys for the coastal California gnatcatcher were conducted in 2015 on June 4, 11, 18 and 25, July 9 and 23, and August 6. Results are mapped in **Figure 2.3.3**. Two pairs of coastal California gnatcatchers were detected during the surveys. Three fledglings were observed with one pair during two of the surveys. Fledglings were not observed with the other pair. All gnatcatcher observations occurred within the coastal California gnatcatcher BSA located outside of the combined proposed Project footprint for both Build Alternatives.

Vegetation associated with the coastal California gnatcatcher BSA outside of the proposed Project boundaries is Diegan coastal sage scrub. Dominant species included in this specific BSA are coastal



sagebrush (*Artemisa californica*), California buckwheat (*Eriogonum fasciculatum*), jojoba (*Simmondsia chinensis*), and San Diego bur-sage (*Ambrosia chenopodiifolia*). Although the specific coastal California gnatcatcher BSA is outside of the proposed Project impact boundaries, it is contiguous with the small patch of Diegan coastal sage scrub described above that occurs within proposed Project boundaries on the hillside next to the I-805 North on-ramp.

## **Environmental Consequences**

### Direct Impacts to Least Bell's Vireo

No direct impacts to least Bell's vireo would occur as a result of construction of either of the Build Alternatives for the proposed Project. The southern willow scrub habitat in which this species breeds and in which the birds were detected is approximately 500 feet beyond the combined proposed Project footprint for both Build Alternatives.

### Noise Impacts to Least Bell's Vireo

Elevated noise levels can potentially mask the least Bell's vireo song, which is used to attract mates and to defend territories. The NSR determined that the project would increase noise levels during construction in occupied suitable least Bell's vireo habitat by 2 dBA Leq (1 hour), and would not increase the operational traffic noise level in occupied suitable least Bell's vireo habitat. These levels are below the threshold of an increase of 3 dBA Leq (1 hour), thus no indirect effects would occur from noise during construction or increased noise due to operations after proposed Project completion.

### Direct Impacts to Coastal California Gnatcatcher

No direct impacts to coastal California gnatcatcher would occur as a result of construction of either of the Build Alternatives for the proposed Project. The Diegan coastal sage scrub habitat in which the individuals of this species breed and forage is located outside of the combined proposed Project footprint for both Build Alternatives.

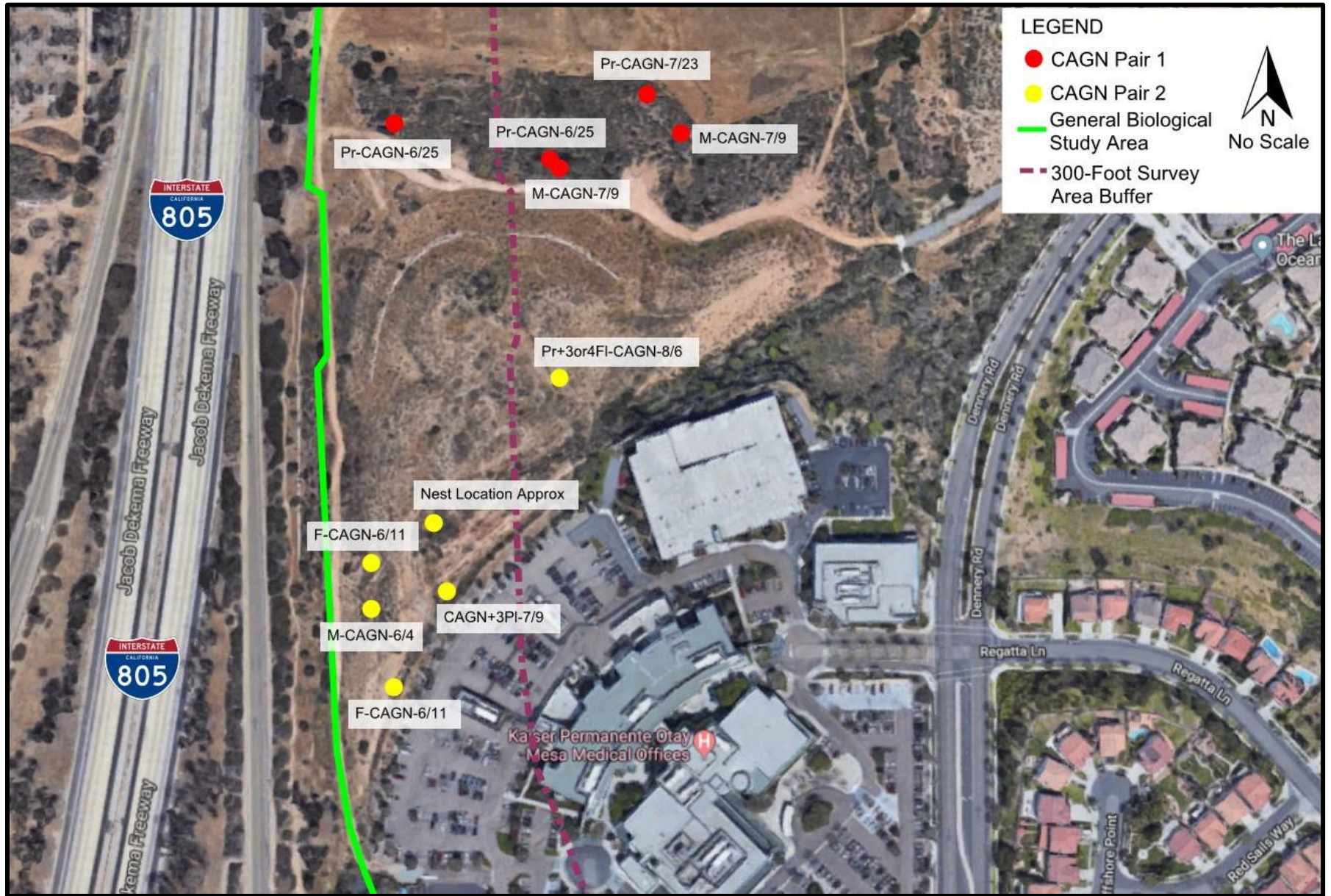
### Noise Impacts to Coastal California Gnatcatcher

The NSR determined that the proposed Project would increase noise levels during construction in occupied suitable coastal California gnatcatcher habitat by 2 dBA Leq (1 hour), and would increase the operational traffic noise level in occupied suitable coastal California gnatcatcher habitat by up to 1 dBA Leq (1 hour). These levels are below the threshold of an increase of 3 dBA Leq (1 hour), thus no indirect effects would occur from noise during construction or due to operations after proposed Project completion.



**Figure 2.3.2**  
**Approximate Locations of Least Bell's Vireo**





**Figure 2.3.3**  
**Approximate Locations of Coastal California Gnatcatchers**

### ***Cumulative Impacts***

Neither Build Alternative is anticipated to impact threatened or endangered species, including least Bell's vireo and coastal California gnatcatcher, because the proposed Project would not impact these biological resources. Therefore, cumulative impacts are not anticipated for threatened and endangered species.

### ***No Build Alternative***

The No Build Alternative proposes no improvements. Therefore, no impacts to threatened or endangered species would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

Direct impacts to least Bell's vireo would be avoided and no indirect impacts would occur. Therefore, minimization and mitigation measures are not necessary. Direct impacts to coastal California gnatcatchers would be avoided and no indirect impacts would occur. Therefore, minimization and mitigation measures are not necessary.

## **2.3.5 Invasive Species**

### **Regulatory Setting**

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

### **Affected Environment**

This section is based on information provided in the "Interstate 805/Palm Avenue Interchange Improvements Project Natural Environment Study, Including Focused Studies for Special-Status Species Interstate 805 and Palm Avenue San Diego County, California" (NES), dated February 28, 2017. Based on the fieldwork within the general BSA, 14 of the 35 species of plants observed were identified as invasive plant species; these are listed in **Table 2.3.2**.

### **Environmental Consequences**

Both Build Alternatives for the proposed Project would disturb the ground and remove both non-native and native vegetation. The general BSA currently supports extensive areas of non-native species, thus control of such species during and after construction is critical to preventing establishment of the proposed Project area. Avoidance and minimization measures that would be incorporated into both Build Alternatives for the proposed Project to prevent impacts are described below. In addition, none of the species on the California list of invasive species would be used by Caltrans for erosion control or landscaping in either Build Alternative for the proposed project.

### ***Cumulative Impacts***

Neither Build Alternative would contribute to the proliferation of invasive species because the proposed Project would implement measures to prevent the introduction and spread of such

species described below in avoidance, minimization, and/or mitigation measures. Therefore, cumulative impacts are not anticipated for invasive species.

**Table 2.3.2 Invasive Plants Observed within the General Biological Study Area**

Scientific Name	Common Name	Cal-IPC <sup>1</sup>
<i>Atriplex semibaccata</i>	Australian Saltbush	BBB
<i>Avena barbata</i>	Oat Grass	BBA
<i>Bromus diandrus</i>	Ripgut Brome	BBA
<i>Bromus hordeaceus</i>	Soft chess	BCA
<i>Cortaderia selloana</i>	Pampas Grass	AAB
<i>Cynodon dactylon</i>	Bermuda Grass	BBB
<i>Erodium sp.</i>	Storksbill	CCA
<i>Foeniculum vulgare</i>	Sweet Fennel	ABA
<i>Glebionis coronaria</i>	Crown Daisy	BBB
<i>Lolium multiflorum</i>	Italian Ryegrass	ABA
<i>Salsola tragus</i>	Prickly Russian-Thistle	CBB
<i>Schinus molle</i>	Peruvian Pepper Tree	CBB
<i>Tamarix sp.</i>	Salt Cedar	AAA
<i>Washingtonia robusta</i>	Mexican Fan Palm	BBC

<sup>1</sup> Codes (California Invasive Plant Council 2006):

Source: NES 2017

### **No Build Alternative**

The No Build Alternative proposes no improvements. Therefore, no impacts from invasive species would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

To ensure neither of the Build Alternatives for the proposed Project would promote the introduction of invasive species to the surrounding undeveloped areas, the following avoidance and minimization measures will be implemented as part of the proposed Project:

- Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds;
- Construction equipment will be inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction;
- Trucks with loads carrying vegetation will be covered;
- Vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations; and
- Invasive species will be monitored during the construction period and removed or treated in an environmentally sound manner.

Also, in compliance with the EO on Invasive Species, EO 13112, and guidance from the FHWA, the landscaping and erosion control included in the proposed Project would not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction



equipment and eradication strategies to be implemented should an invasion occur, as described above.

## **2.4 Construction Impacts**

### **Affected Environment**

Proposed construction activities could cause temporary impacts with respect to many environmental issues. A discussion of construction impacts is provided in each resource section where such impacts could occur, including *Land Use, Parks and Recreation, Utilities, Traffic and Transportation and Pedestrian and Bicycle Facilities, Water Quality and Storm Water Runoff, Paleontological Resources, Hazardous Waste/Materials, Air Quality, Noise, and Threatened and Endangered Species*.

### **Environmental Consequences**

Environmental consequences related to construction impacts are discussed individually by resource. Construction impacts for all issues were concluded to be temporary and short in duration. Potential impacts would be addressed by implementation of avoidance, minimization and/or mitigation measures provided in each resource section of this environmental document.

### **Avoidance, Minimization, and/or Mitigation Measures**

Avoidance, minimization, and/or mitigation measures to address construction impacts are discussed in each resource section.

## **2.5 Cumulative Impacts**

### **Regulatory Setting**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed Project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and proposed 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 proposed Project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the proposed Project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR), Section 1508.7.

## Affected Environment

The CEQA Guidelines require a discussion of cumulative impacts of a project when a project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of the individual project are considerable when viewed in connection with the effects of past, current and probable future projects. (Guidance for Preparers of Cumulative Impact Assessments CEQA Guidelines for Cumulative and Indirect Impacts, Caltrans, 2005) The major developments within the proposed Project vicinity (as discussed in Table 2.1.1) would not reasonably be expected to impact resources in the area and are all anticipated to complete construction activity prior to the start of construction on the proposed Project. The proposed Project impacts are all less than significant with incorporated mitigation. Therefore, the proposed Project will not have impacts that are "cumulatively considerable" when viewed in connection of other probable past, present, or future projects in the area.

## Environmental Consequences

The proposed Project would not be anticipated to result in a significant increase in cumulative impacts to resources in the project vicinity. **Table 2.5.1** shows the active development projects within the proposed Project vicinity. It is not anticipated that these projects would contribute to any cumulative impacts. All of these projects are anticipated to be completed before construction would begin for either of the Build Alternatives.

**Table 2.5.1 Major Developments within the Proposed Project Vicinity**

Name	Jurisdiction	Proposed Uses	Status
Otay Valley Manhole Improvements	City of San Diego	Replacement or rehabilitation of 69 existing manholes in the Otay Valley area.	Under construction
Pipeline Rehab I-2	City of San Diego	4.5 miles of sewer lateral rehabilitation in various council districts. Repairs may include spot repairs where open trench is required.	Complete
Sewer Lateral Rehab Project J-2	City of San Diego	Rehabilitating existing 4-inch service laterals associated with completed sewer main rehabilitation projects phase J-1, J-1A, J-1B and J-1C. This includes install cleanouts for the service laterals, and point repairing laterals.	Under construction
Palm Avenue Roadway Improvements	City of San Diego	Pedestrian and traffic safety improvements on Palm Avenue from Beyer Way to Delcardo Avenue. The improvements include raised center medians, turn pockets, traffic signals, crosswalks, striping, and signage. The limits of Phase I are from E/O Beyer Way to Delcardo, and the interim phase consists of improvements at the intersection of Beyer Way to Palm Avenue.	Under construction
<u>I-805 Recycled Water Pipeline Project</u>	<u>Caltrans</u>	<u>A recycled water pipeline is being proposed along I-805 in the vicinity of the project.</u>	<u>In PA/ED</u>

## Avoidance, Minimization and/or Mitigation Measures

No additional avoidance, minimization, or mitigation measures are necessary as the proposed Project would not be anticipated to result in a significant increase in cumulative impacts to resources in the project vicinity.

## 3 Chapter 3 – California Environmental Quality Act Evaluation

### 3.1 Determining Significance Under CEQA

The proposed Project is a joint Project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this proposed Project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (Project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the proposed Project and ways to mitigate each significant effect. If the proposed Project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this proposed Project and CEQA significance.

### 3.2 CEQA Environmental Checklist

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 will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Proposed Project features, which can include both design elements of the proposed Project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the proposed Project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

## Aesthetics

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Aesthetics***

#### a), b) No Impact

No scenic vistas exist in the proposed Project area and the proposed Project is not within a state scenic highway.

#### c) Less Than Significant Impact

As discussed in **Section 2.1.6 Visual/Aesthetics**, portions of the proposed Project would alter the existing visual character of the site. However, the impacts will not substantially degrade the existing visual character or quality of the site and its surroundings as the proposed Project would be improving an already-existing freeway, bridge, and road.

#### d) Less Than Significant Impact

As discussed in **Section 2.1.6 Visual/Aesthetics**, the visual character at night would change due to the addition of pedestrian scale lighting at the bridge. This addition of light would not adversely affect nighttime views in the area. The proposed Project would not create glare that would adversely affect daytime views.

## Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<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) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### CEQA Significance Determinations for Agriculture and Forest Resources

a, b, c, d, e) No Impact

The proposed Project would not result in impacts to farmland. Therefore, no avoidance, minimization, or mitigation measures would be necessary. No forest or timberlands exist within the proposed Project limits.



## Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

### CEQA Significance Determinations for Air Quality

#### a, b, c) No Impact

The proposed Project is located in the SDAB and is within the jurisdiction of the SDAPCD and California Air Resources Board (CARB). The SDAPCD is the primary agency responsible for writing the AQMP in cooperation with SANDAG, local governments, and the private sector. The AQMP provides the blueprint for meeting state and federal ambient air quality standards.

The proposed Project will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the very short duration of Project construction. The proposed Project is included in the San Diego Association of Governments (SANDAG) most recent RTP and RTIP both of which were found to be conforming (**Section 2.2.6**). Therefore, the proposed Project would not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts will be less than significant. No mitigation is required.

As discussed in **Section 2.2.6**, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. The proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the proposed Project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

d), e) Less Than Significant

Proposed temporary construction activities could generate fugitive dust from the operation of construction equipment. The proposed Project would comply with construction standards adopted by the SDAPCD as well as Caltrans standardized procedures for minimizing air pollutants during construction. Odors during construction could be generated by diesel-fueled construction equipment, haul trucks, and asphalt paving. However, these odors would be temporary, would disperse rapidly with distance from the source, and would not affect a substantial number of people off site. Impacts will be less than significant. No mitigation is required.

## Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

## ***CEQA Significance Determinations for Biological Resources***

### a) Less Than Significant with Mitigation Incorporated

Both of the Build Alternatives for the proposed Project would involve potential temporary impacts to a strip of Diegan coastal sage scrub located along the eastern limit of the proposed Project. If the 0.3-acre of disturbed Diegan coastal sage scrub cannot be avoided and is directly and temporarily impacted during construction, this impact would be significant under CEQA. Mitigation would be accomplished through revegetation of the 0.3-acre temporarily disturbed during construction, as discussed above. This mitigation measure would reduce construction-related impacts to disturbed Diegan coastal sage scrub to less than significant under CEQA.

Although Caltrans is not a participant in the MSCP, Caltrans strives to be consistent with the guidelines to avoid cumulative impacts to wildlife resources. The proposed Project will implement the Multi-Habitat Planning Area (MHPA) land use adjacency guidelines that address potential indirect effects to the MHPA and includes the following issue areas: 1) drainage; 2) toxics; 3) lighting; 4) noise; 5) barriers; 6) invasive species; 7) brush management; and 8) grading/land development. The proposed Project is not subject to lighting or residential development brush management issues described in the guidelines.

The proposed Project will be consistent with the MHPA land use guidelines by adhering to the following:

- **Grading/Land Use Development Barriers:** Temporary construction areas and roads, staging areas, or permanent access roads will not disturb existing habitat unless determined to be unavoidable; temporary habitat disturbance of a small area of coastal sage scrub will be minimized by restoration and mitigation of the disturbed area after proposed Project completion. Manufactured slopes and landscaping, which would serve as a barrier between the proposed Project and sensitive areas, will also be incorporated into the project designs. AMMMs, including the delineation of the project footprint and biological monitoring during all construction activities, will also be implemented to avoid encroachment into surrounding sensitive areas and other issues associated with grading and development;
- **Drainage, Toxics, and Invasive Species:** All developed and paved areas will prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes; this will be accomplished using Caltrans storm water BMPs; Construction Site and Designed Pollution Prevention and Treatment BMPs for impacted stormwater facilities and the monitoring for invasive species will also be implemented to address drainage, toxics, and invasive species issues; and
- **Noise:** Uses in the MHPA will be designed to minimize noise impacts; a noise study conducted at the locations of detected vireos and gnatcatchers concluded that construction and operation of the proposed Project, as designed, would not result in indirect impacts to these special status species associated with noise. AMMMs, including the performance of preconstruction biological surveys and biological monitoring during construction, would address temporary noise issues associated with construction on adjacent lands.

Neither of the Build Alternatives for the proposed Project would result in impacts to southern willow scrub. Therefore, mitigation measures are not necessary for this vegetation community. As only 0.3-acre of disturbed Diegan coastal sage scrub is anticipated, the proposed Project is not expected to impede the use of native wildlife nursery sites.

### b) Less Than Significant with Mitigation Incorporated

As discussed in **Section 2.3.1**, both Build Alternatives would involve potential temporary impacts to a strip of Diegan coastal sage scrub, which is considered a sensitive biological community. The proposed Project would not result in direct impacts to Diegan coastal sage scrub beyond the limits

of the general BSA. Impacts to this sensitive community would be minimized through delineating the proposed Project footprint prior to construction to avoid encroachment into surrounding sensitive areas, and the presence of a qualified biological monitor throughout proposed construction activities for the duration of the proposed Project. If the 0.3-acre of disturbed Diegan coastal sage scrub is directly and temporarily impacted, mitigation would be accomplished through revegetation of the 0.3-acre temporarily disturbed during construction.

Although surveys were conducted within the endangered least Bell's vireo BSA, which encompasses areas of sensitive southern willow scrub habitat associated with the Otay River, this area is located approximately 500 feet north of the northernmost proposed Project boundary and would not be directly disturbed by the proposed Project. Therefore, avoidance, minimization, and mitigation measures are not necessary for this vegetation community.

c) No Impact

As detailed in the Wetlands and Other Waters section of the NES, neither Build Alternative would have a substantial adverse effect on federally protected wetlands as no jurisdictional waters or wetlands are located within the general BSA.

d) No Impact

No wildlife corridors occur within the general BSA. As detailed in **Section 2.3.1** corridors will exist in the least Bell's vireo and coastal California gnatcatcher BSAs. The proposed Project would not impact any migratory fish species. As only 0.3-acre of disturbed Diegan coastal sage scrub is anticipated, the proposed Project is not expected to impede the use of native wildlife nursery sites.

e) No Impact

The proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Trees would be removed during construction in both Build Alternatives, however, the proposed Project area would be restored to existing conditions when construction is completed. The proposed Project conforms with MSCP guidelines and conditions of coverage to ensure that no cumulative impacts to biological resources would occur as a result of the proposed Project.

f) No Impact

As discussed in **Sections 2.1.1, 2.3.1, and 2.3.2**, though Caltrans is not a participant in the City of San Diego's MSCP, Caltrans strives to be consistent with the guidelines to avoid cumulative impacts to wildlife resources. The proposed Project intends to comply with the MSCP by adhering to the guidelines outlined above in item a).



## Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Cultural Resources***

a) No Impact

No potentially eligible historic districts, historic landscapes, or other historic properties were identified within or partially within the proposed Project APE.

b) No Impact

No qualifying cultural resources have been identified within the APE.

c) Less Than Significant with Mitigation Incorporated

Both Build Alternatives would impact the San Diego Formation, which is a formation with a high potential to contain paleontological resources. To mitigate potential impacts to these resources, the proposed Project would require monitoring during excavation and recovery of fossil remains if they are detected. Engagement of a Qualified Project Paleontologist would occur before, during, and after construction. Please see **Section 2.2.4** for a detailed description of mitigation measures. Implementing a PMP will reduce construction-related impacts to paleontological resources to less than significant levels under CEQA.

No geologic natural landmarks or landforms with special characteristics were identified in the proposed Project area, so no such impacts would occur for either Build Alternative.

d) Less Than Significant Impact

As no qualifying cultural resources exist within the Area of Potential Effect, the proposed Project is not anticipated to encounter human remains. However, should the proposed Project encounter human remains, the proposed Project would remain consistent with State, Regional, and Local Plans and Programs by implementing Caltrans standards. Procedures for treatment of human remains are listed in Policy COS-7.5 in the San Diego County General Plan.

## Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

## **CEQA Significance Determinations for Geology and Soils**

a) See sub sections

i) No Impact

The proposed Project site is not located within an Alquist-Priolo Earthquake Study Zone.

ii) Less Than Significant Impact

The proposed Project site is located approximately 5.5 miles east of the Newport-Inglewood-Rose Canyon Fault (Silver Strand section-Downtown Graben fault), which is capable of producing a 7.5 maximum earthquake. Based on the findings of the Structure Preliminary Geotechnical Report (2011), the proposed Project area has a low susceptibility to damage from seismic shaking.

iii) No Impact

The potential for liquefaction to occur at the proposed Project site is considered to be low due to the presence of dense previously placed compacted fill and dense formational materials, and the lack of shallow permanent groundwater.

iv) No Impact

The potential for liquefaction, lateral spreading, expansive soils, and collapsible soils is low and landslides are not anticipated to impact the proposed Project. Minimization measures recommended in the Structure Preliminary Geotechnical Report will be incorporated to further reduce the risk of geologic hazards.

b) Less Than Significant Impact

BMPs proposed in **Section 2.2.2** would stabilize soils and reduce potential erosion during construction.

c) No Impact

Impacts related to landslide, lateral spreading, subsidence, liquefaction or collapse would be minimal and further avoided by incorporating proposed minimization measures detailed in **Section 2.2.3**.

d) No Impact

Most of the soil in the proposed Project area is granular in nature. Also, the proposed foundations would be supported by piles embedded in dense materials. Therefore, the potential for expansive soils to affect the proposed foundations is considered to be low.

e) No Impact

The use of septic tanks or alternative waste water disposal systems will not be necessary.

## Greenhouse Gas Emissions

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<p>Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to the proposed Project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the proposed Project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the proposed Project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.</p>			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

## Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 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 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>



## ***CEQA Significance Determinations for Hazards and Hazardous Materials***

### a) No Impact

The proposed Project is not anticipated to involve the routine transport, use, or disposal of hazardous materials. Any hazardous materials encountered during the proposed Project will be disposed of according to federal, state, and local regulations and would therefore not create a significant hazard to the public.

### b) No Impact

The proposed Project is not anticipated to result in the accidental release of hazardous materials into the environment.

### c) No Impact

The proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile from an existing or proposed school.

### d) Less Than Significant with Mitigation

As discussed in **Section 2.2.5**, the Unocal Service Station and Kaiser Foundation Health Plan Facility have had unauthorized releases containing petroleum hydrocarbons that would have a low potential to impact soil beneath the proposed Project area of either Build Alternative. The ISA concluded that no adverse impact to the proposed Project area is expected, but depending on where planned construction excavations are located adjacent to the locations affected by this spill incident, soil that requires special handling and disposal may be generated.

The former South Bay Burn Site is located approximately 300 feet south of Palm Avenue and approximately 400 feet east of the I-805 North off-ramp, apparently beneath a portion of the existing Palm Promenade Shopping Center in the southeast quadrant of the proposed Project area. The ISA concluded that remnants of the burn site may potentially be encountered during proposed construction activities near the I-805 North off-ramp for Alternative 1 + IV.

Mitigation measures detailed in **Section 2.2.5** include the observation of excavations for contamination, the proper handling of undocumented subsurface features, review of as-built drawings for asbestos and lead, conducting an asbestos and lead survey prior to beginning construction, sampling and management of contaminated soil, and the preparation of a project-specific health and safety plan to protect worker exposure to hazardous materials. Should contamination be encountered, it will be contained and handled in accordance with regulatory protocols to minimize the potential of public exposure to contamination.

### e) No Impact

The proposed Project is not located within an airport land use plan or within 2 miles of a public airport.

### f) No Impact

The proposed Project is not located within the vicinity of a private airstrip.

### g) No Impact

The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

### h) No Impact

The proposed Project is not anticipated to expose people or structures to significant risk of loss, injury, or death involving wildland fires.

## Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>

## ***CEQA Significance Determinations for Hydrology and Water Quality***

### a) No Impact

Minimization features detailed in **Section 2.2.2** will be implemented to maintain compliance with water quality standards and discharge requirements. The proposed Project does not discharge to a water body identified on the 303(d) list for any of the Targeted Design Constituents (TDC); phosphorous, nitrogen, total copper, dissolved copper, total lead, dissolved lead, total zinc, dissolved zinc, sediments, and general metals. No special requirements or concerns, including TMDLs or effluent limits, have been raised within the proposed Project limits. The proposed Project is located within the City of San Diego's jurisdiction and will comply with the City's MS4 permit requirements. In addition, the proposed Project would include a bioretention BMP facility that would detain increased runoff, and would implement proper Construction Site, Design Pollution Prevention and Treatment BMPs to protect water quality during construction and long-term operations

### b) No Impact

The proposed Project would not utilize groundwater resources or interfere with groundwater recharge.

### c) No Impact

The existing site conditions contain very steep slopes; the proposed Project would maintain or decrease the slope in these areas. The proposed Project would treat 100 percent of the water quality flow, thereby treating 100 percent of the net increased impervious area. Consequently, the proposed Project is not anticipated to substantially alter drainage in a way that increases siltation or erosion in the long term.

Temporary impacts would occur primarily during construction and for the first four to six months of operations, before soil stability and vegetative cover have re-established. The proposed Project would minimize storm water impacts by implementing proper Construction Site, Design Pollution Prevention and Treatment BMPs listed in **Section 2.2.2**.

### d) Less Than Significant Impact

The increased impervious surface for the proposed Project is anticipated to result in a relatively minor increase in the rate or amount of runoff, which is not anticipated to result in flooding on- or off-site.

### e) No Impact

The Drainage Report (2016) analyzed the effects of the 100-year flood event upon existing conditions considering all offsite runoff as defined in the 2009 Preliminary Hydraulic Review in Appendix A of the Drainage Report. The increased impervious surface for the proposed Project is anticipated to result in a relatively minor increase in runoff, which will not exceed the capacity of the currently operating storm drain during the anticipated 100-year flow.

f) Less Than Significant with Mitigation Incorporated

A number of mitigation measures will be implemented to prevent the degradation of water quality. These measures include:

- Implementation of proper Construction Site, Design Pollution Prevention, and Treatment BMPs;
- Construction of all storm water facilities within the proposed Project would be constructed at the earliest phase possible;
- Visual monitoring will be carried out for storm water discharge during construction. Sampling and analysis for non-visible pollutants will be implemented if pollutants are found to be present;
- Fiber rolls will be placed on the faces of slopes to slow down runoff and remove sediments; gravel bags will be used as additional protection to intercept sediments. Standard Caltrans Inlet Protection is proposed at drainage inlets;
- A construction entrance will be used to reduce tracking of dirt onto the roadways; concrete washout will also be used to prevent cement from flowing to drainage systems locations of these temporary BMPs are subject to the Contractor's phasing of the work and timing of operations; the Contractor is ultimately responsible for developing a SWPPP that complies with the Caltrans NPDES permit;
- Drain inlet stenciling will be implemented on City streets; locations will be verified with Caltrans functional units during final design when all drainage units for the proposed Project are identified; and
- The proposed Project will treat 100 percent of the water quality flow, therefore treating 100 percent of the net increased impervious area.

g) No Impact

The proposed Project does not propose housing.

h) No Impact

The proposed Project would not encroach on the boundaries of the 100-year flood and there would be no impact to the existing FEMA floodplain.

i) No Impact

The proposed Project would result in a very minor increase in surface water runoff and will therefore not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam

j) No Impact

Inundation by seiche or tsunami is not anticipated to occur for the proposed Project. During construction, exposed slopes will be stabilized by mechanical means to prevent mudflows. Upon proposed Project completion, slopes will be revegetated.

**Land Use and Planning**

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<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 type="checkbox"/>	<input checked="" 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"/>

***CEQA Significance Determinations for Land Use and Planning***

a) No Impact

Neither Build Alternative would introduce a barrier that would divide the community, separate residences from community facilities, or interfere with existing residential or commercial land uses.

b) No Impact

Neither Build Alternative would conflict with land use plans or programs because the proposed Project would not conflict with any goals or policies.

c) No Impact

The Build Alternatives for the proposed Project are within the boundaries of the City of San Diego MSCP. While Caltrans is not a signatory of the MSCP, Caltrans strives to be consistent with the guidelines to avoid cumulative impacts to wildlife resources.



**Mineral Resources**

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<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"/>

***CEQA Significance Determinations for Mineral Resources***

a), b) No Impact

Geological materials underlying the site do not contain known mineral resources.

## Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

## ***CEQA Significance Determinations for Noise***

### a), c), d) Less Than Significant Impact

Upon completion of the proposed Project, noise levels would either be less than, the same, or no greater than 2 decibels higher than the No Build Alternative noise levels. Therefore, under CEQA, no significant noise impact would occur as a result of the proposed Project and no mitigation is required. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise.

However, under NEPA/23 CFR 772, because the noise levels at several receptors already approach or exceed the noise abatement criteria of 67dBA, noise abatement would need to be considered. Two noise barriers (NB-1 Alternative A and NB-1 Alternative B) were considered, but construction was determined to be feasible but not reasonable for both options. Therefore, neither noise barrier is recommended for construction.

### b) No Impact

San Diego County General Plan LU-2.8: Mitigation of Development Impacts will be implemented. This requires measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.

### e) No Impact

The proposed Project is not located within an airport land use plan or within two miles of a public airport.

### f) No Impact

The proposed Project is not within the vicinity of a private airstrip.

## Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<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"/>

### ***CEQA Significance Determinations for Population and Housing***

a) No Impact

Both Build Alternatives would make minor modifications to accessibility on I-805; these changes will not induce substantial population growth in the area.

b) No Impact

No displacement of housing is anticipated for the proposed Project.

c) No Impact

No displacement of people is anticipated for the proposed Project.

**Public Services**

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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CEQA Significance Determinations for Public Services**

a), b), c), d), e) No Impact/Less Than Significant Impact

As the proposed Project consists of minor improvements to Palm Avenue and I-805, it is not anticipated to impact service ratios, response times, or other performance objectives for fire protection, police protection, schools, or other public facilities. Park access will be maintained throughout construction. There would be minor impacts to park activities, which would be avoided and minimized throughout construction.



**Recreation**

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>

***CEQA Significance Determinations for Recreation***

a) No Impact

The proposed Project is not anticipated to increase the use of existing parks.

b) Less Than Significant Impact

One of the mitigation measures for Palm Ridge Neighborhood Park is that the proposed Project would include repair and/or replacement of the Palm Ridge Park surface parking lot or another improvement similar in terms of scope and scale benefitting the park and recreation facilities. The parking lot replacement would not have a significantly adverse physical effect on the environment.

**Transportation/Traffic**

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Transportation/Traffic***

#### a) Less Than Significant with Mitigation Incorporated

The proposed Project would not conflict with traffic plans, ordinances, or policies. A TMP would be prepared for the proposed Project to mitigate impacts to traffic. The TMP is subject to change as required by changing circumstances. Implementation of this plan will reduce impacts to Less Than Significant and ensures compliance with existing plans.

#### b) No Impact

The proposed Project does not anticipate conflict with an applicable congestion management program.

#### c) No Impact

The proposed Project would not result in a change in air traffic patterns.

#### d) No Impact

The proposed Project does not anticipate any increased hazards due to design features.

#### e) Less Than Significant with Mitigation Incorporated

The proposed Project may impact emergency services during construction. Access to emergency services, though impeded, would be maintained to all land uses at all times via detours or other traffic control measures. Impacts will be minimized by the implementation of the TMP. A public awareness campaign will be implemented to make users of the interchange aware of the temporary impacts during construction. The public awareness campaign would include information regarding emergency services and access to emergency services such as Kaiser Permanente. Public notices will be made available during construction so that access to emergency services would not be impacted.

#### f) No Impact

The proposed Project does not anticipate conflicts with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities nor does it impact the performance or safety of such facilities.

**Tribal Cultural Resources**

<b>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</b>	<b>Significant and Unavoidable Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***CEQA Significance Determinations for Tribal Cultural Resources***

a) No Impact

The location of the proposed Project is not listed or eligible for listing in California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) according to the state inventory.

b) No Impact

Two Native American contact programs were implemented in 2011 and 2016. The most recent sacred lands inquiry was submitted January 7, 2016 to the Native American Heritage Commission (NAHC) requesting an updated contact list and revised sacred lands search. The NAHC reported on February 10, 2016 that no sacred lands are recorded within the APE, and they provided a list of 11 local Native American Tribal contacts or interested parties. Letters were sent on February 11, 2016 to the names provided and responses are documented in the HPSR.

## Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



### ***CEQA Significance Determinations for Utilities and Service Systems***

a) No Impact

The proposed Project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board.

b) No Impact

The proposed Project would not require the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

c) Less Than Significant Impact with Mitigation Incorporated

The Build Alternatives would require minor modifications to the existing drainage system, which consists of inlets, storm drains, box culverts, slope down drains, ditches and natural channels. Most of the existing storm drains would continue to be used in the Build Alternatives. Some existing storm drains would be moved and some additional inlets may be needed due to proposed changes in road alignment. Proper Construction Site, Design Pollution Prevention and Treatment BMPs will be implemented. All storm water facilities to be constructed with the proposed Project would be constructed at the earliest phase possible. Visual monitoring for storm water discharge will be implemented during construction. Sampling and analysis for non-visible pollutants will occur in the case of the event of previous site contamination or if any spill was observed during inspection of the construction site. Implementation of these measures will reduce impacts to less than significant.

d) No Impact

No new or expanded entitlements are anticipated for the proposed project. Sufficient water supplies are present at the location of the proposed Project.

e) No Impact

The current wastewater treatment provider is anticipated to have adequate capacity to serve the Project's projected demand in addition to existing commitments.

f) No Impact

The proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the proposed Project's solid waste disposal needs.

g) No Impact

The proposed Project would comply with federal, state, and local statutes and regulations related to solid waste.

## Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

### CEQA Significance Determinations for Mandatory Findings of Significance

#### a) No Impact

The proposed Project is not anticipated to degrade the quality of the environment or affect the population of a fish, wildlife, or plant species.

#### b) Less Than Significant Impact

The incremental effects of the proposed Project in connection with the effects of past projects, current projects, and probable future projects have a less than significant impact.

#### c) Less Than Significant Impact with Mitigation Incorporated

Impacts to *Biological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Recreation, Transportation and Traffic, and Utilities and Service Systems* will be reduced to less than significant with the implementation of the mitigation discussed in Chapter 2. These mitigated impacts will not cause substantial adverse effects on human beings.

### 3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.<sup>1</sup> In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.<sup>2</sup> The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

#### Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

##### ***Federal***

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.<sup>3</sup> This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability."<sup>4</sup> Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist

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<sup>1</sup> <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

<sup>2</sup> <https://www.arb.ca.gov/cc/inventory/data/data.htm>

<sup>3</sup> <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

<sup>4</sup> <https://www.sustainablehighways.dot.gov/overview.aspx>

in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, [Congress](#) set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the [U.S. Department of Energy](#) administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 74 *Federal Register* 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, 80 *Federal Register* 15869 (March 2015): This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous executive orders to ensure agency operations and facilities prepare for impacts of climate change. This order revokes Executive Order 13514.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in [Massachusetts v. EPA](#) (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing [Clean Air Act](#) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an [endangerment finding](#) in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for [new cars and light-duty vehicles](#) in April 2010<sup>5</sup> and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that

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<sup>5</sup> <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>  
Page 220 of 268

increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.<sup>6</sup>

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO<sub>2</sub> emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

Presidential Executive Order 13783, *Promoting Energy Independence and Economic Growth*, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

## **State**

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a

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<sup>6</sup> <http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256> and <https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>



strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97, Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

## Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 ([AB 32](#)), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. ARB approved the [First Update to the Climate Change Scoping Plan](#) on May 22, 2014. ARB is moving forward with a [discussion draft of an updated Scoping Plan](#) that will reflect the 2030 target established in EO B-30-15 and Senate Bill 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California.<sup>7</sup> ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in **Figure 3.3.1** represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate

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<sup>7</sup> 2016 Edition of the GHG Emission Inventory Released (June 2016): <https://www.arb.ca.gov/cc/inventory/data/data.htm>

assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO<sub>2</sub>e<sup>8</sup>. The 2017 edition of the GHG emissions inventory ([released June 2017](#)) found total California emissions of 440.4 MMTCO<sub>2</sub>e, showing progress towards meeting the AB 32 goals.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO<sub>2</sub>e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO<sub>2</sub>e.

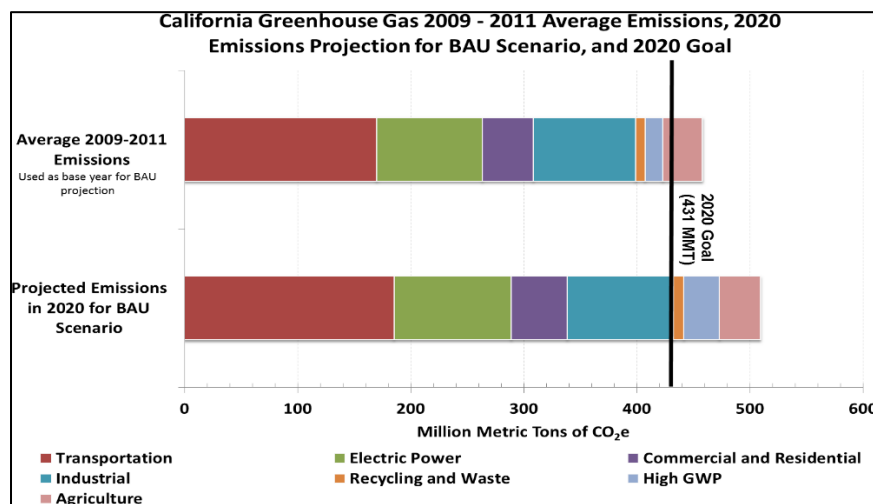


Figure 3.3.1

### 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

#### Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.<sup>9</sup> In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the proposed Project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed Project.

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to

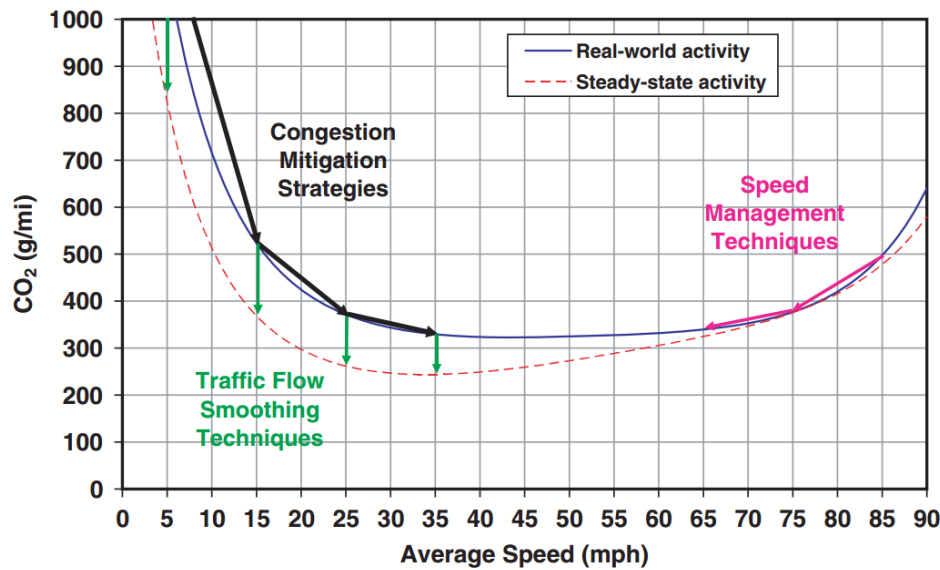
<sup>8</sup> The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

<sup>9</sup> This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in project Level NEPA Analysis, July 13, 2009).

lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.<sup>1</sup>

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.<sup>1</sup>

### Operational Emissions



Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 2010 (<http://uctc.berkeley.edu/research/papers/846.pdf>)

Figure 3.3.2

#### Possible Use of Traffic Operation Strategies in Reducing On-Road CO<sub>2</sub> Emissions

FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that the State of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO<sub>2</sub> from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour (see **Figure 3.3.2** above). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO<sub>2</sub>, may be reduced.

The proposed Project is listed in the 2050 Regional Transportation Plan (RTP). The RTP includes a Sustainable Communities Strategy (SCS), which seeks to guide the San Diego region toward a more sustainable future by integrating land use, housing, and transportation planning to create communities that are more sustainable, walkable, transit oriented, and compact. SANDAG had previously adopted the Regional Comprehensive Plan (RCP) in 2004 in conjunction with the RTP, which integrates transportation, land use, and housing planning to create a more sustainable region. As part of its mandate under SB 375, in 2010, the California Air Resources Board set specific targets for reducing GHG emissions for cars and light trucks for each of the state's regions from a 2005 base year. The GHG targets set for the San Diego region call for a 7 percent per capita reduction by 2020 and a 13 percent per capita reduction by 2035.

The San Diego region aims to meet or exceed these targets by, among other means, using land in ways that make developments more compact, conserving open space, and investing in a transportation network that gives residents transportation options. In accordance with SB 375, the building blocks for SANDAG's SCS include:

- A land use pattern that accommodates the region's future employment and housing needs, and protects sensitive habitats and resource areas;
- A transportation network of public transit, managed lanes and highways, local streets, bikeways and walkways built and maintained with reasonably expected funding;
- Managing demands on the Traffic Design Management (TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand;
- Managing the Traffic System Management (TSM) through measures to maximize the efficiency of the transportation network; and
- Innovative pricing policies and other measures designed to reduce vehicle miles traveled and traffic congestion during peak periods of demand.

The purpose of the proposed Project is to increase the I-805/Palm Avenue Interchange capacity in order to accommodate projected future traffic increases. Currently, the I-805/Palm Avenue Interchange operates fairly effectively with the measured traffic volumes. Some queuing forms during the heaviest traffic volume peaks, but the intersections move vehicles through and keep delays at a reasonable duration. However, the I-805/Palm Avenue Interchange is "Above Capacity" in the PM peak hour according to the Caltrans ILV analysis. Further, the traffic volumes are projected to increase due to additional development to the east of the I-805/Palm Avenue Interchange. The existing capacity would not be able to handle the increase in volumes and operational deficiencies are expected to occur at the I-805/Palm Avenue Interchange in the future as volume increases. The proposed Project would change the I-805/Palm Avenue Interchange configuration to improve vehicle capacity and minimize operational deficiencies in future years.

The proposed Project meets the criteria from the SCS by improving the existing transportation network and giving local residents transportation options as a capacity increasing project. The proposed Project provides Class IV bike lanes, improves congestion, and offers transit options under both Build Alternatives. Both Build Alternatives assist the region with the overall goals to reduce vehicle related GHGs and to decrease traffic congestion during peak periods of demand by decreasing queue times, adding additional lanes, and lengthening turn pockets so that there is no spill-over into highway traffic.

The proposed Project is designed to reduce congestion and vehicle time delays in both Build Alternatives. Both Build Alternatives include widening the bridge with sidewalks and bike facilities on both sides of the bridge, the realignment of existing ramps, restriping traffic lanes, and signal modifications. While the proposed Project would increase the I-805/Palm Avenue Interchange vehicular capacity, Palm Avenue is a multimodal corridor. The existing transit, bicycle, and pedestrian facilities along Palm Avenue must be enhanced and incorporated into the proposed I-805/Palm Avenue Interchange Project to provide a consistent quality transportation system. Several other projects are being carried out by Caltrans and SANDAG that will affect the proposed I-805/Palm Avenue Interchange operations at Palm Avenue/ I-805 and will enhance multimodal operations throughout the area and beyond.

No transit alternatives were proposed as an alternative to either Build Alternative. In 1994, Caltrans prepared a Project Study Report/ Project Report (PSR/PR) and a Project Study Report (PSR) for proposed improvements to the I-805/Palm Avenue Interchange. Proposed Improvements included in the PSR/PR included signalizing of the ramp intersections, widening of the SB off-ramp, and widening of the bridge and approach. To date, only the initial phase, which consisted of the signalization of the ramp intersections, widening of the southbound off-ramp, and minor approach modifications were performed.

The current proposed Build Alternatives for the proposed Project differ from alternatives identified in the original PSR due to the City of San Diego's decision to add a Class IV Separated Bikeway across the bridge in lieu of a Class II Bikeway. This decision has increased the Right-of-Way impacts associated with Palm Ridge Park.

### Quantitative Analysis

Information and analysis used in the calculation of GHG emissions was obtained from the Traffic Study (2014) conducted to assess impacts from the No Build Alternative, and the two Build Alternatives (Alternative 1 + IV and Alternative 2 + IV). The quantitative analysis summarized below is presented in the " I-805/Palm Avenue Interchange Project Greenhouse Gas Analysis Memorandum" dated July 12, 2017.

**Table 3.3.1** presents a summary of the GHG emissions for the No Build Alternative and Build Alternatives. The differences in GHG emissions from the No Build versus Build Alternatives has to do with the configuration of the I-805/Palm Avenue Interchange, length of travel on I-805/Palm Avenue Interchange ramps, and the amount of congestion along Palm Avenue under the various alternatives.

**Table 3.3.1 Modeled Annual CO<sub>2</sub> Emissions and Vehicle Miles Traveled, by Alternative**

Alternative	CO <sub>2</sub> Emissions (Metric Tons/ Year)	Annual Vehicle Miles Traveled
Existing/Baseline 2014	35,845	65,671,138
Open to Traffic 2020		
No Build	33,544	72,139,565
Alternative 1 + IV	33,614	71,864,047
Alternative 2 + IV	33,919	72,296,756
20-Year Horizon/Design-Year 2040		
No Build	31,535	96,268,904
Alternative 1 + IV	31,220	96,037,455
Alternative 2 + IV	31,175	96,160,293

Source: Greenhouse Gas Memorandum

As shown in **Table 3.3.1**, both Build Alternatives would result in a small increase in GHG emissions in 2020 as compared to the No Build Alternative due to increased travel distances for the reconfigured ramps. In 2040, GHG emissions would decrease for both Build Alternatives as compared to the No Build Alternative due to the improvement in flow and reduced congestion at the interchange.

CO<sub>2</sub> emissions numbers are only useful for a comparison between alternatives. The numbers are not necessarily an accurate reflection of what the true CO<sub>2</sub> emissions will be because CO<sub>2</sub> emissions are dependent on other factors that are not part of the model such as the fuel cycle and fuel mix (EMFAC model emission rates are only for direct engine-out CO<sub>2</sub> emissions, not full fuel cycle; fuel cycle emission rates can vary dramatically depending on the amount of additives like ethanol and the source of the fuel components).

While EMFAC has a rigorous scientific foundation, and has been vetted through multiple stakeholder reviews, its emission rates are based on tailpipe emission test data. The numbers are estimates of CO<sub>2</sub> emissions and not necessarily the actual CO<sub>2</sub> emissions. The model does not account for factors such as the rate of acceleration and the vehicles' aerodynamics, which would influence CO<sub>2</sub> emissions. To account for CO<sub>2</sub> emissions, ARB's GHG Inventory follows the IPCC guidelines by assuming complete fuel combustion. It was assumed that CH<sub>4</sub> and N<sub>2</sub>O emissions are



not meaningful compared to CO<sub>2</sub> emissions from fuel combustion. Though EMFAC is currently the best available tool for use in calculating GHG emissions, it is important to note that the CO<sub>2</sub> numbers provided are primarily useful for a comparison of alternatives. These emissions estimates were based off of the EMFAC2014 model. The ARB has published a new version of the EMFAC (EMFAC2017), but the new EMFAC has not yet been approved by the USEPA (as of March 2018), therefore EMFAC2014 was used in the AQTR as well as this section.

### **Construction Emissions**

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Based on model outputs from the *Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model*, the construction emissions have been estimated. Daily construction emissions estimates are shown in **Table 3.3.2** and total construction emissions estimates are shown in **Table 3.3.3** for Alternative 1 + IV. Daily construction emissions estimates are shown in **Table 3.3.4** and total construction emissions estimates are shown in **Table 3.3.5** for Alternative 2 + IV. Emissions estimates are based off of several assumptions. Construction is assumed to begin in 2020 and is estimated to last for 18 months with 22 working days per month. The total length of construction is 1.6 miles with a total area of 32.9 acres based on the DSA in the Drainage Report. A total maximum disturbed area per day was calculated by dividing the total acreage by the number of working days and multiplying by two to obtain a maximum value. Water trucks will be used to minimize fugitive dust emissions. Land clearing of heavily vegetated areas has occurred previously and therefore will not be necessary during this proposed Project phase. It is assumed that the predominant material to be hauled into and out of the Proposed Project area will be materials associated with paving. These assumptions yield the GHG emissions estimates in the following tables.

GHG emissions from construction can be reduced through innovations in plans and specifications and implementing traffic management programs during the construction phase of the proposed Project.

### **CEQA Conclusion**

While construction may result in a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions due to construction will be offset by the improvement in operational GHG emissions. It is Caltrans's 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 proposed Project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

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**Table 3.3.2 Daily Construction Emissions Estimates for Alternative 1 + IV**

Proposed Project Phases	ROG (lbs/day)	CO (lbs/day)	NO <sub>x</sub> (lbs/day)	Total PM <sub>10</sub> (lbs/day)	Exhaust PM <sub>10</sub> (lbs/day)	Fugitive Dust PM <sub>10</sub> (lbs/day)	Total PM <sub>2.5</sub> (lbs/day)	Exhaust PM <sub>2.5</sub> (lbs/day)	Fugitive Dust PM <sub>2.5</sub> (lbs/day)	SO <sub>x</sub> (lbs/day)	CO <sub>2</sub> (lbs/day)	CH <sub>4</sub> (lbs/day)	N <sub>2</sub> O (lbs/day)	CO <sub>2</sub> e (lbs/day)
Grubbing/Land Clearing	1.37	11.39	14.18	1.82	0.62	1.20	0.80	0.55	0.25	0.03	2,417.23	0.60	0.03	2,440.26
Grading/Excavation	6.74	54.89	71.08	4.64	3.44	1.20	3.36	3.11	0.25	0.10	9,860.21	2.86	0.10	9,960.40
Drainage/Utilities/Sub-Grade	3.82	34.00	36.33	3.09	1.89	1.20	1.99	1.74	0.25	0.06	5,881.15	1.20	0.06	5,927.99
Paving	1.79	18.97	19.11	1.02	1.02	0.00	0.86	0.86	0.00	0.05	4,436.39	0.77	0.08	4,479.25
<b>Maximum (lbs/day)</b>	<b>8.11</b>	<b>66.29</b>	<b>85.27</b>	<b>6.46</b>	<b>4.06</b>	<b>2.40</b>	<b>4.16</b>	<b>3.66</b>	<b>0.50</b>	<b>0.13</b>	<b>12,277.45</b>	<b>3.46</b>	<b>0.12</b>	<b>12,400.66</b>
<b>Total (tons/construction project)</b>	<b>0.88</b>	<b>7.49</b>	<b>9.00</b>	<b>0.65</b>	<b>0.45</b>	<b>0.20</b>	<b>0.45</b>	<b>0.40</b>	<b>0.04</b>	<b>0.01</b>	<b>1,368.11</b>	<b>0.34</b>	<b>0.01</b>	<b>1,381.02</b>

**Table 3.3.3 Total Construction Emissions Estimates for Alternative 1 + IV**

Proposed Project Phases	ROG (tons/phase)	CO (tons/phase)	NO <sub>x</sub> (tons/phase)	Total PM <sub>10</sub> (tons/phase)	Exhaust PM <sub>10</sub> (tons/phase)	Fugitive Dust PM <sub>10</sub> (tons/phase)	Total PM <sub>2.5</sub> (tons/phase)	Exhaust PM <sub>2.5</sub> (tons/phase)	Fugitive Dust PM <sub>2.5</sub> (tons/phase)	SO <sub>x</sub> (tons/phase)	CO <sub>2</sub> (tons/phase)	CH <sub>4</sub> (tons/phase)	N <sub>2</sub> O (tons/phase)	CO <sub>2</sub> e (MT/Phase)
Grubbing/Land Clearing	0.03	0.23	0.28	0.04	0.01	0.02	0.02	0.01	0.00	0.00	47.86	0.01	0.00	43.83
Grading/Excavation	0.53	4.35	5.63	0.37	0.27	0.10	0.27	0.25	0.02	0.01	780.93	0.23	0.01	715.65
Drainage/Utilities/Sub-Grade	0.26	2.36	2.52	0.21	0.13	0.08	0.14	0.12	0.00	0.00	407.56	0.08	0.00	372.68
Paving	0.05	0.56	0.57	0.03	0.03	0.00	0.03	0.03	0.02	0.00	130.76	0.02	0.00	120.69
<b>Maximum (tons/phase)</b>	<b>0.53</b>	<b>4.35</b>	<b>5.63</b>	<b>0.37</b>	<b>0.27</b>	<b>0.10</b>	<b>0.27</b>	<b>0.25</b>	<b>0.02</b>	<b>0.01</b>	<b>780.93</b>	<b>0.23</b>	<b>0.01</b>	<b>715.65</b>
<b>Total (tons/construction project)</b>	<b>0.88</b>	<b>7.49</b>	<b>9.00</b>	<b>0.65</b>	<b>0.45</b>	<b>0.20</b>	<b>0.45</b>	<b>0.40</b>	<b>0.04</b>	<b>0.01</b>	<b>1,368.11</b>	<b>0.34</b>	<b>0.01</b>	<b>1,252.86</b>

Table 3.3.4 Daily Construction Emissions Estimates for Alternative 2 + IV

Proposed Project Phases	ROG (lbs/day)	CO (lbs/day)	NO <sub>x</sub> (lbs/day)	Total PM <sub>10</sub> (lbs/day)	Exhaust PM <sub>10</sub> (lbs/day)	Fugitive Dust PM <sub>10</sub> (lbs/day)	Total PM <sub>2.5</sub> (lbs/day)	Exhaust PM <sub>2.5</sub> (lbs/day)	Fugitive Dust PM <sub>2.5</sub> (lbs/day)	SO <sub>x</sub> (lbs/day)	CO <sub>2</sub> (lbs/day)	CH <sub>4</sub> (lbs/day)	N <sub>2</sub> O (lbs/day)	CO <sub>2</sub> e (lbs/day)
Grubbing/Land Clearing	1.37	11.39	14.18	2.22	0.62	1.60	0.88	0.55	0.33	0.03	2,417.23	0.60	0.03	2,440.26
Grading/Excavation	6.74	54.89	71.08	5.04	3.44	1.60	3.45	3.11	0.33	0.10	9,860.21	2.86	0.10	9,960.40
Drainage/Utilities/Sub-Grade	3.82	34.00	36.33	3.49	1.89	1.60	2.08	1.74	0.33	0.06	5,881.15	1.20	0.06	5,927.99
Paving	1.79	18.97	19.11	1.02	1.02	0.00	0.86	0.86	0.00	0.05	4,436.39	0.77	0.08	4,479.25
<b>Maximum (lbs/day)</b>	<b>8.11</b>	<b>66.29</b>	<b>85.27</b>	<b>7.26</b>	<b>4.06</b>	<b>3.20</b>	<b>4.33</b>	<b>3.66</b>	<b>0.67</b>	<b>0.13</b>	<b>12,277.45</b>	<b>3.46</b>	<b>0.12</b>	<b>12,400.66</b>
<b>Total (tons/construction project)</b>	<b>0.88</b>	<b>7.49</b>	<b>9.00</b>	<b>0.72</b>	<b>0.45</b>	<b>0.27</b>	<b>0.46</b>	<b>0.40</b>	<b>0.06</b>	<b>0.01</b>	<b>1,368.11</b>	<b>0.34</b>	<b>0.01</b>	<b>1,381.02</b>

Table 3.3.5 Total Construction Emissions Estimates for Alternative 2 + IV

Proposed Project Phases	ROG (tons/phase)	CO (tons/phase)	NO <sub>x</sub> (tons/phase)	Total PM <sub>10</sub> (tons/phase)	Exhaust PM <sub>10</sub> (tons/phase)	Fugitive Dust PM <sub>10</sub> (tons/phase)	Total PM <sub>2.5</sub> (tons/phase)	Exhaust PM <sub>2.5</sub> (tons/phase)	Fugitive Dust PM <sub>2.5</sub> (tons/phase)	SO <sub>x</sub> (tons/phase)	CO <sub>2</sub> (tons/phase)	CH <sub>4</sub> (tons/phase)	N <sub>2</sub> O (tons/phase)	CO <sub>2</sub> e (MT/Phase)
Grubbing/Land Clearing	0.03	0.23	0.28	0.04	0.01	0.03	0.02	0.01	0.01	0.00	47.86	0.01	0.00	43.83
Grading/Excavation	0.53	4.35	5.63	0.40	0.27	0.13	0.27	0.25	0.03	0.01	780.93	0.23	0.01	715.65
Drainage/Utilities/Sub-Grade	0.26	2.36	2.52	0.24	0.13	0.11	0.14	0.12	0.02	0.00	407.56	0.08	0.00	372.68
Paving	0.05	0.56	0.57	0.03	0.03	0.00	0.03	0.03	0.00	0.00	131.76	0.02	0.00	120.69
<b>Maximum (tons/phase)</b>	<b>0.53</b>	<b>4.35</b>	<b>5.63</b>	<b>0.40</b>	<b>0.27</b>	<b>0.13</b>	<b>0.27</b>	<b>0.25</b>	<b>0.03</b>	<b>0.01</b>	<b>780.93</b>	<b>0.23</b>	<b>0.01</b>	<b>715.65</b>
<b>Total (tons/construction project)</b>	<b>0.88</b>	<b>7.49</b>	<b>9.00</b>	<b>0.72</b>	<b>0.45</b>	<b>0.27</b>	<b>0.46</b>	<b>0.40</b>	<b>0.06</b>	<b>0.01</b>	<b>1,368.11</b>	<b>0.34</b>	<b>0.01</b>	<b>1,252.86</b>

## Greenhouse Gas Reduction Strategies

### Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined in AB 32 and Senate Bill 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

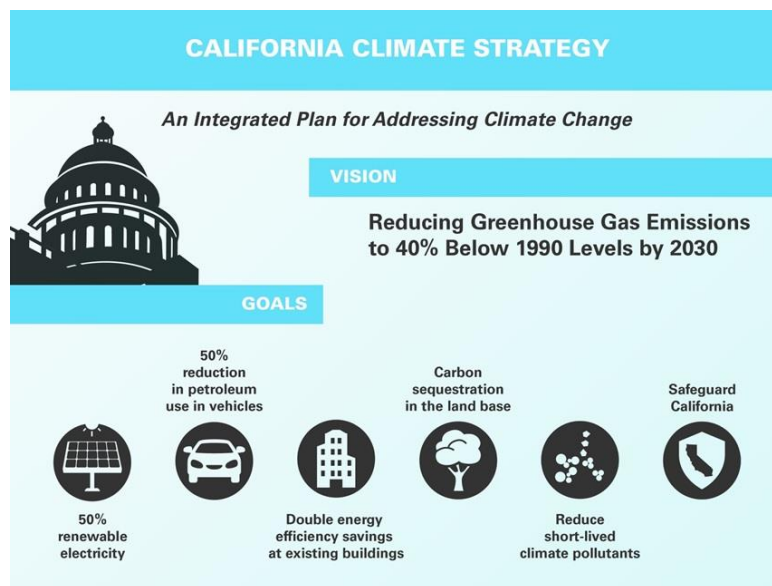


Figure 3.3.3

### The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of [Governor Brown's key pillars](#) sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

### Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and Senate Bill 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.



### *California Transportation Plan (CTP 2040)*

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

Senate Bill 391(Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

### *Caltrans Strategic Management Plan*

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share;
- Reducing VMT per capita; and
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions.

### *Funding and Technical Assistance Programs*

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in [Caltrans Activities to Address Climate Change](#) (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

[Caltrans Activities to Address Climate Change](#) (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

### ***Project-Level GHG Reduction Strategies***

The following measures will also be implemented in the proposed Project to reduce GHG emissions and potential climate change impacts from the proposed Project.

Landscaping reduces surface warming and, through photosynthesis, decreases CO<sub>2</sub>. The proposed Project recommends planting in the intersection slopes and seeding in areas next to ramps as well as planting a variety of different-sized plant material. These trees will help offset any potential CO<sub>2</sub> emissions increase.

According to Caltrans Standard Specifications, the contractor must comply with all local APCD rules, ordinances, and regulations for air quality restrictions.

## Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

### Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and NOAA, released its interagency task force progress report on October 28, 2011<sup>1</sup>, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”<sup>2</sup>

To further the DOT Policy Statement, in December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).<sup>3</sup> This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.<sup>4</sup>

### State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with

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<sup>1</sup> <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

<sup>2</sup> [https://www.fhwa.dot.gov/environment/sustainability/resilience/policy\\_and\\_guidance/usdot.cfm](https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm)

<sup>3</sup> <https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm>

<sup>4</sup> <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

information on local uplift and subsidence, coastal erosion rates, predicted higher high-water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, [Sea-Level Rise for the Coasts of California, Oregon, and Washington](#) (Sea-Level Rise Assessment Report)<sup>5</sup> was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed [The California Climate Adaptation Strategy](#) (Dec 2009),<sup>6</sup> which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as [Safeguarding California: Reducing Climate Risk \(Safeguarding California Plan\)](#).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the [State of California Sea-Level Rise Interim Guidance Document](#) (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR." The [March 2013 update](#)<sup>7</sup> finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

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 actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The proposed Project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

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<sup>5</sup> Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (2012) is available at: [http://www.nap.edu/catalog.php?record\\_id=13389](http://www.nap.edu/catalog.php?record_id=13389).

<sup>6</sup> <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

<sup>7</sup> <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/>

## 4 Chapter 4 – Comments and Coordination

### 4.1 Introduction

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this proposed Project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and PDT meetings. This chapter summarizes the results of Caltrans's efforts to fully identify, address, and resolve Project-related issues through early and continuing coordination.

### 4.2 Public Scoping Process

#### 4.2.1 Public Scoping Meeting

On February 10, 2016, a meeting was held with the Otay Mesa Nestor Community Planning Group for the purpose of introducing the proposed Project with design alternatives to the Planning Group. The Build Alternatives were presented along with information on impacts to the Palm Ridge Neighborhood Park. Comments were encouraged, and the overall meeting was met with positive comments, per the PDT Meeting Minutes dated March 9, 2016.

A meeting was held with the Otay Mesa Recreation Council at which the City presented proposed improvements. This meeting was held on January 11, 2018. Olga Estrada and San Li of Caltrans were present at the meeting.

#### 4.2.2 Additional Project Outreach

Throughout the planning and design process, Caltrans and City of San Diego have striven to keep the public fully informed of progress and decisions in the proposed Project design process. The following table details the communication between various interested parties:

**Table 4.2.1 Project Public Outreach**

<b>Date</b>	<b>Group or Agency</b>
May 11, 2011	Communication with Kumeyaay Nation- Melissa Estes of the Campo Environmental department
May 17, 2011	Communication with Ewiiapaayp Tribe- Michael Garcia, Vice Chairperson
May 17, 2011	Communication with Iipay Nation of Santa Ysabel- Clint Linton, Director of Cultural Resources
May 17, 2011	Communication with Jamul Indian Village- Kenneth Meza, Chairperson
May 17, 2011	Communication with Kumeyaay Diegueno Land Conservancy- M. Louis Guassac, Executive Director
May 17, 2011	Communication with La Posta Band of Mission Indians- Gwendolyn Parada, Chairperson

**Table Continued on Next Page**

(Continued) Table 4.2.1 Project Public Outreach

Date	Group or Agency
May 17, 2011	Communication with Manzanita Band of Kumeyaay Nation- Leroy J. Elliott, Chairperson
January 18, 2012	Communication with Sycuan Band of the Kumeyaay Nation- Sheila Silva, Executive Assistant to the Chairperson
January 18, 2012	Communication with Viejas Band of Kumeyaay Indians- Anthony R. Pico, Chairperson
January 18, 2012	Communication with Viejas Kumeyaay Indian Reservation- Frank Brown
January 18, 2012	Communication with Barona Group of the Capitan Grande- Val, Director of Planning and Development
January 18, 2012	Communication with Inaja Band of Mission Indians- Rebecca Osuna, Spokesperson
January 18, 2012	Communication with Kwaaymii Laguna Band of Mission Indians- Carmen Lucas
January 18, 2012	Communication with Mesa Grande Band of Mission Indians- Lynn Carstonson, Executive Assistant
January 18, 2012	Communication with San Pasqual Band of Mission Indians- Doris Cudwell, Executive Assistant to Business Committee
January 7, 2016	Letter sent to San Diego County Representative of the Native American Heritage Commission (NAHC)
February 10, 2016	NAHC response to letter
February 10, 2016	Otay Mesa Nestor Community Planning Group Meeting
February 11, 2016	<p>Letter sent to Tribes identified by NAHC identifying the consultation list of tribes with traditional lands or cultural places located within the boundaries of San Diego County. Letters were sent to the following:</p> <ul style="list-style-type: none"><li>• <u>Ewiiapaayp Tribal Office - Robert Pinto Sr., Chairperson</u></li><li>• <u>La Posta Band of Mission Indians - Gwendolyn Parada, Chairperson</u></li><li>• <u>Manzanita Band of Kumeyaay Nation - Angela Elliot Santos, Chairperson</u></li><li>• <u>Sycuan Band of Kumeyaay Nation - Cody J. Martinez, Chairperson</u></li><li>• <u>Viejas Band of Kumeyaay Indians - Anthony R. Pico, Chairperson</u></li><li>• <u>Campo Band of Mission Indians - Ralph Goff, Chairperson</u></li><li>• <u>Jamul Indian Village - Raymond Hunter, Chairperson</u></li><li>• <u>Kwaaymii Laguna Band of Mission Indians - Carmen Lucas</u></li><li>• <u>lipay Nation of Santa Ysabel - Clint Linton, Director of Cultural Resources</u></li><li>• <u>lipay Nation of Santa Ysabel - Virgil Perez, Chairperson</u></li><li>• <u>Ewiiapaayp Tribal Office - Michael Garcia, Vice Chairperson</u></li></ul>

### 4.3 Project Development Team Meetings

A PDT was formed and has been in coordination to produce this Environmental Document since 2007. The PDT consists of the City of San Diego, Caltrans, and various consultants. The PDT



met monthly during the course of proposed Project development and continues to meet as issues arise requiring technical direction and resolution. PDT meetings have been held to discuss various proposed Project Technical Reports, proposed Project alternatives, agency coordination, proposed Project schedules, and document submittals.

## 4.4 Agency Coordination

### 4.4.1 Initiation of Agency Participation

The City of San Diego and Caltrans have coordinated with representatives of resource and regulatory agencies to enhance the overall quality of decisions made throughout this environmental review process for the I-805/Palm Avenue Interchange Project. Coordination has occurred with the following regulatory agencies: U.S. Fish and Wildlife Service; National Oceanic and Atmospheric Administration's National Marine Fisheries Service, City of San Diego Department of Park and Recreation; San Diego County Parks and Recreation Department; California Department of Water Resources; San Diego Association of Governments; California Department of Fish and Wildlife; California Office of Emergency Services; Native American Heritage Commission; California Highway Patrol; California Air Resources Board; San Diego Air Pollution Control District; California Regional Water Quality Control Board; the Federal Highway Administration; and Native American tribes. Information regarding coordination with the specific agencies can be found in **Table 4.4.1**.

**Table 4.4.1 Agency Coordination Record**

<b>Agency</b>	<b>Type of Coordination</b>	<b>Date of Coordination/Letters</b>	<b>Location of Coordination Record</b>
<u>U.S. Fish and Wildlife Service</u>	Updated list of threatened and endangered species that may occur in proposed Project location, and/or may be affected by your proposed Project	February 21, 2017	Natural Environment Study- Appendix C
<u>U.S. Fish and Wildlife Service</u>	Report of Least Bell's Vireo Surveys Conducted for the Proposed I-805/ Palm Avenue Interchange Improvements Project	September 2, 2015	Natural Environment Study- Appendix D
<u>U.S. Fish and Wildlife Service</u>	Focused Survey Results for Coastal Gnatcatcher ( <i>Polioptila californica californica</i> ) for the I-805 Palm Avenue Interchange Improvements Project, 2015	October 6, 2015	Natural Environment Study- Appendix E
SANDAG	2014 Regional Transportation Improvement Program: Amendment No. 7 and Air Quality Conformity Analysis	October 16, 2015	Air Quality Technical Report- Appendix B

**Table Continued on Next Page**

(Continued) Table 4.4.1 Agency Coordination Record

Agency	Type of Coordination	Date of Coordination/Letters	Location of Coordination Record
SANDAG	Transmittal of Amendment No. 7 to the 2014 Regional Transportation Improvement Program for the San Diego Association of Governments	October 23, 2015	Air Quality Technical Report- Appendix B
California Department of Transportation	Deputy Directive- Transportation Management Plans	January 15, 2015	Preliminary Transportation Management Plan- Appendix E
Native American Heritage Commission	Native American Consultation, Request for a Sacred Lands File Search and Native American Contacts List, Tribal Contact Letters and Phone Logs	April 5, 2011 through February 11, 2016	Historic Property Survey Report- Appendix C
<u>U.S. Fish and Wildlife Service</u>	<u>Threatened and Endangered Species List</u>	<u>April 26, 2019</u>	<u>Appendix F</u>
<u>National Oceanic and Atmospheric Administration's National Marine Fisheries Service</u>	<u>Threatened and Endangered Species List</u>	<u>April 16, 2019</u>	<u>Appendix F</u>
<u>City of San Diego Park and Recreation Department</u>	<u>Final 4(f) de minimis Determination Concurrence</u>	<u>Dated April 5, 2019</u> <u>Signed April 16, 2019</u>	<u>Appendix A</u>
<u>Federal Highway Administration</u>	<u>Air Quality Conformity Determination</u>	<u>May 14, 2019</u>	<u>Appendix G</u>

The CDFW commented on the Draft IS/EA. The CDFW comment letter and the response is included in **Section 4.7**.

#### 4.5 Public Participation Process

As required by CEQA Guidelines Section 15105, a public Notice of Availability of the Draft IS/EA for the I-805/Palm Avenue Interchange Improvements Project was published in the *San Diego Union Tribune* on October 17, 2018 (see **Figure 4.5.1**).

The Notice of Availability of the Draft IS/EA and Announcement of Public Meeting were combined into one notice. The notice was published in both English and Spanish. Letters were sent to local residents to inform them of the public meeting.

The Draft IS/EA was circulated for public review for a period of 30 days, from October 8, 2018 to November 7, 2018. Copies of the Draft IS/EA were distributed to the State Clearinghouse (SCH #2018101025), Federal, State, and local officials, nearby residents and businesses, and other Federal State, and local agencies. A total of 122 electronic copies were sent to those identified in the Distribution List in **Chapter 6**.

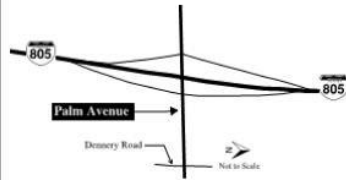
Copies of the Draft IS/EA were also available for public review at the following locations:

- Caltrans District 11 Environmental Documents Website:  
<http://www.dot.ca.gov/d11/environmental/>.
- Caltrans District 11 Office  
4050 Taylor Street  
San Diego, CA 92110
- Otay Mesa-Nestor Public Library  
3003 Coronado Avenue  
San Diego, CA 92154

A meeting was held before the Final Environmental Document was produced. The Public Meeting was held on October 24, 2018 and the public was encouraged to comment on the document during the meeting and through the public review period.



# PUBLIC NOTICE



## NOTICE OF AVAILABILITY OF THE DRAFT INITIAL STUDY/ENVIRONMENTAL ASSESSMENT FOR THE INTERSTATE 805/PALM AVENUE INTERCHANGE IMPROVEMENTS PROJECT AND ANNOUNCEMENT OF PUBLIC MEETING (OPEN HOUSE FORMAT)

**WHAT'S BEING PLANNED?** The California Department of Transportation (Caltrans), in coordination with the City of San Diego, has prepared a Draft Initial Study with proposed Mitigated Negative Declaration / Environmental Assessment and Section 4(f) De Minimis Determination (IS/EA), which examines the potential environmental impacts of the proposed Interstate 805/Palm Avenue Interchange Improvement Project in the City of San Diego.

Caltrans is the lead agency under the National Environmental Policy Act (NEPA) on behalf of the Federal Highway Administration (FHWA) pursuant to 23 United States Code (USC) 327 because the proposed Project may involve access modification of an interstate. Caltrans is also the lead agency under the California Environmental Quality Act (CEQA).

**WHY THIS AD?** The City of San Diego and Caltrans have studied the effects the project may have on the environment. The results of these studies show that the project will not have a significant effect on the environment with the included mitigation measures. The IS/EA, which discusses potential project impacts, has been prepared. This notice is to inform you of the IS/EA and its availability for review and notice of a public meeting. Caltrans intends to adopt a Mitigated Negative Declaration and to issue a Finding of No Significant Impact (FONSI) for this project pending completion of the public review period that started **October 8, 2018 and ends November 7, 2018**. This does not mean that Caltrans' decision regarding the project is final. This document is subject to modification based on comments received by interested agencies and the public.

**ABOUT THE PUBLIC MEETING:** There will be no formal presentation. This will be an "Open Forum" meeting where you will have the opportunity to speak directly with Caltrans and City representatives about the project and its environmental impacts. All substantive comments will be addressed in the final environmental document.

**WHAT'S AVAILABLE:** The draft IS/EA for the Interstate 805/Palm Avenue Interchange Improvements Project is available for review between October 8 – November 7, 2018 weekdays from 8 a.m. to 5 p.m. at the Caltrans San Diego Office, 4050 Taylor St., San Diego, CA 92110. It is also available at the Otay Mesa-Nestor Public Library at 3003 Coronado Avenue, San Diego CA 92154 between 9:30 a.m. and 6 p.m. This document is also available on the internet: <http://www.dot.ca.gov/d11/environmental/>.

**WHERE YOU COME IN:** Have the potential impacts been addressed? Do you have information that should be included? Do you agree with the findings? Your comments will become part of the public record. Please submit your comments during the public review period by **November 7, 2018**. If you wish to submit written comments, please send them to Olga Estrada, Caltrans District 11, 4050 Taylor Street, MS 242, San Diego, CA 92110 or by email at [Olga.Estrada@dot.ca.gov](mailto:Olga.Estrada@dot.ca.gov).

**PUBLIC MEETING:** Otay Mesa-Nestor Public Library Community Room  
3003 Coronado Avenue, San Diego CA 92154  
5:30 p.m. to 7:30 p.m.

Individuals who require special accommodations (American Sign or Foreign Language interpreter, accessible seating, documentation in alternative formats, etc.) are requested to contact the **District 11 Public Information Office at (619) 688-6670** at least 10 days prior to the scheduled meeting date. **TTY users may contact California Relay Service TTY line at (800) 735-2929 or 711.**

**CONTACT:** For more information about this project, please contact Olga Estrada, Caltrans Senior Environmental Planner, at (619) 688-0229 or Negin Afagh, City of San Diego Project Manager, at (619) 235-1999.

Figure 4.5.1 Notice of Public Hearing/Notice of Availability Newspaper Advertisement

#### **4.5.1 Public Meeting**

The public meeting was held on October 24, 2018 from 5:30 p.m. to 7:30 p.m. at the Otay Mesa-Nestor Public Library, 3003 Coronado Avenue, San Diego, CA 92154. The meeting was held in an open house format. No members of the public attended the public meeting.

#### **4.5.2 Public Comments at the Public Meeting**

No questions or comments were brought to the Project Development Team during the public meeting.

### **4.6 Additional Consultation and Coordination with Public Agencies**

#### **4.6.1 U.S. Fish and Wildlife Consultation Under Section 7 of the Federal Endangered Species Act of 1973**

The USFWS is responsible for administering the FESA for the proposed Project. Regulations governing interagency cooperation under Section 7 are found in 50 CFR Part 402. The opinion issued at the conclusion of the consultation would include a statement authorizing take that may occur incidental to an otherwise legal activity. The USFWS has prepared a list of threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed Project (found in the attachments of the NES).

### **4.7 Comments and Response to Comments**

This section contains comments from the public review of the Draft IS/EA with responses and proposed resolution. A response has been made to all substantive comments received on the Draft IS/EA.

A total of three comment letters on the Draft IS/EA were received from the State Clearinghouse, CDFW, and the Viejas Tribal Government during the public review period. These comments are summarized in **Table 4.7.1**, below.

**Table 4.7.1 Summary of Comment Letters Received During the Public Comment Period**

<b>Letter No.</b>	<b>Name of Sender</b>	<b>Date</b>
1	State Clearinghouse	11/8/2018
2	Viejas Tribal Government	11/2/2018
3	California Department of Fish and Wildlife	11/6/2018



## 4.7.1 Comment and Response to Letter 1: State Clearinghouse



EDMUND G. BROWN JR.  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH



KEN ALEX  
DIRECTOR

November 8, 2018

Olga Estrada  
California Department of Transportation, District 11  
4050 Taylor St  
San Diego, CA 92110

Subject: Interstate 805/Palm Avenue Interchange Improvements  
SCH#: 2018101025

Dear Olga Estrada:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on November 7, 2018, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

1-1

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044  
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2018101025  
**Project Title** Interstate 805/Palm Avenue Interchange Improvements  
**Lead Agency** Caltrans #11

**Type** MND Mitigated Negative Declaration  
**Description** The City of San Diego proposes to improve the interchange at I-805 and Palm Ave located in the community of Otay Mesa in the city of San Diego within San Diego County. Palm Ave is classified as a four-lane collector and is a prime arterial between I-805 and Dennery Rd. The project would widen the existing overcrossing, add an eastbound through-lane on the bridge, and widen and realign the highway ramps and roadways. This project would increase capacity to address the increase in local traffic that has occurred and is expected to increase in the future.

**Lead Agency Contact**

**Name** Olga Estrada  
**Agency** California Department of Transportation, District 11  
**Phone** 619-688-0229 **Fax**  
**email**  
**Address** 4050 Taylor St  
**City** San Diego **State** CA **Zip** 92110

**Project Location**

**County** San Diego  
**City** San Diego  
**Region**  
**Lat / Long** 32° 35' 01.8" N / 117° 02' 13.1" W  
**Cross Streets** I-805/Palm Ave  
**Parcel No.**  
**Township** **Range** **Section** **Base**

**Proximity to:**

**Highways** 805, 905  
**Airports**  
**Railways**  
**Waterways** Otay River  
**Schools**  
**Land Use** Res, commercial, recreational, educational uses

**Project Issues** Aesthetic/Visual; Air Quality; Biological Resources; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Quality; Landuse; Cumulative Effects

**Reviewing Agencies** Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Department of General Services; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 9; Native American Heritage Commission

**Date Received** 10/09/2018 **Start of Review** 10/09/2018 **End of Review** 11/07/2018

**Response to Comment 1-1**

Thank you for acknowledgment of receipt of the document.

**4.7.2 Comment and Response to Letter 2: Viejas Tribal Government**



P.O. Box 908  
Alpine, CA 91903  
#1 Viejas Grade Road  
Alpine, CA 91901

Phone: 6194453810  
Fax: 6194455337  
viejas.com

October 22, 2018

Olga Estrada  
Environmental Analysis Branch A  
Caltrans District 11  
4050 Taylor Street, M.S. 242  
San Diego, CA 92110

**RE: Interstate 805/palm Avenue Interchange Improvements Project**

Dear Ms. Estrada,

The Viejas Band of Kumeyaay Indians ("Viejas") has reviewed the proposed project and at this time we have determined that the project site has cultural significance or ties to Viejas.

Viejas Band request that a Kumeyaay Cultural Monitor be on site for ground disturbing activities to inform us of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains.

Please provide us, prior to ground disturbing activities, with the name and contact information for the ground disturbing contractor or business firm.

Please call me at 619-659-2312 or Ernest Pingleton at 619-659-2314 or email, [rteran@viejas-nsn.gov](mailto:rteran@viejas-nsn.gov) or [epingleton@viejas-nsn.gov](mailto:epingleton@viejas-nsn.gov), for scheduling. Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ray Teran", is written over a light blue horizontal line.

Ray Teran, Resource Management  
VIEJAS BAND OF KUMEYAAY INDIANS

2-1

## **Response to Comment 2-1**

Thank you for your letter and your request for a Native American Monitor to be on-site for project-related ground disturbing activity. Caltrans typically secures monitors when project related activities are taking place within an area known to have cultural sensitivity. Because the whole of the project area is substantially disturbed by prior development, the probability to encounter cultural resources is close to non-existent. As such, Caltrans will not be securing Native American or archaeological monitors for this project.

Pursuant to Caltrans procedures, if, in the highly unlikely event cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until the nature and significance of the find are assessed. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are not thought by the Coroner to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD).



## 4.7.3 Comment and Response to Letter 3: California Department of Fish and Wildlife



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
South Coast Region  
3883 Ruffin Road  
San Diego, CA 92123  
(858) 467-4201  
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor  
CHARLTON H. BONHAM, Director



November 6, 2018

Olga Estrada, Chief  
Environmental Branch  
California Department of Transportation District 11  
4050 Taylor Street, MS 242  
San Diego, CA 92110  
olga.estrada@dot.ca.gov

**Subject: Comments on the Initial Study with Proposed Mitigated Negative Declaration for the Interstate 805/Palm Avenue Interchange Improvement Project (SCH# 2018101025)**

Dear Ms. Estrada:

The Department of Fish and Wildlife (Department) has reviewed the above-referenced Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Interstate 805 (I-805)/Palm Avenue Interchange Improvement Project (Project) dated October 2018.

The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the proposed project (California Environmental Quality Act [CEQA], Guidelines § 15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (CESA; Fish and Game Code [FGC] § 2050 et seq.) and FGC section 1600 et seq. The Department also administers the Natural Community Conservation Planning program. The Project is located in the Southern Area of the City of San Diego's Multiple Species Conservation Program Subarea Plan (City SAP). The comments provided herein are based on the information provided in the IS/MND; the Natural Environment Study dated December 8, 2015; the CITY SAP; and our knowledge of sensitive and declining habitats.

The Project area is located within the City of San Diego (City), south of the City of Chula Vista. At this location, Palm Avenue crosses west-east approximately 40 feet above I-805 on a bridge with two through lanes and two left turn lanes in each direction. The City would provide all the funding for the Project. The City is coordinating project planning, environmental documentation, and engineering design with Caltrans District 11. The City's SAP Otay Mesa Multiple Habitat Planning Area (MHPA) occurs directly northwest of the Project area. Figure 1 (enclosed), a map created by the Department, depicts an approximate overlay of the MHPA and the Project area. The MHPA in this area includes a mix of coastal sage scrub (CSS), riparian/wetlands, and eucalyptus woodlands (see Figure 2, enclosed, originally Figure 2 of the City MSCP).

The Project would include widening the existing Palm Avenue overcrossing, adding one through lane in the eastbound direction on the bridge, widening and realigning the highway ramps, and widening and realigning approach roadways. The Project would also include bicycle lanes and sidewalks on each side of Palm Ave.

*Conserving California's Wildlife Since 1870*

According to the IS/MND, the north end of the Project area abuts the southern riparian habitat along the Otay River. The IS/MND also discloses temporary impacts to a 0.3-acre area of CSS within the Project boundary on the east side of the Palm Avenue I-805 on-ramp. The temporary impact to CSS would be mitigated by post-construction revegetation. The remainder of the Project area is categorized as ornamental and ornamental/disturbed habitat.

According to the IS/MND, the Biological Study Area (BSA) included the Project footprint and two adjacent habitat areas: 1) an approximately 15-acre polygon in the Otay River riparian habitat extending approximately 500 feet north of the Project boundary, and 2) an approximately 9.5-acre area of CSS located "partially within but mostly outside of the proposed Project footprint." However, the BSA did not include other undeveloped lands adjacent to the Project footprint.

In 2015, protocol surveys were conducted for state and federally listed least Bell's vireos (*Vireo bellii pusillus*) within the 15-acre riparian habitat identified in the IS/MND. Surveys were also conducted for state Species of Special Concern and federally listed coastal California gnatcatchers (*Polioptila californica californica*) within the CSS identified in the IS/MND. Two territorial male least Bell's vireos were detected, but surveyors did not confirm presence of female mates. Additionally, surveyors detected a breeding coastal California gnatcatcher pair and fledglings. The IS/MND indicated no direct impacts would occur to either bird species because they were outside the Project footprint. Additionally, the noise study determined that no indirect impacts would occur during project construction since the increase in noise would be less than three decibels.

The Department has identified potential effects of this Project on wildlife and sensitive habitats and provides the following specific comments and recommendations to assist the City and Caltrans in avoiding or minimizing potential impacts to sensitive species and habitats.

1. The IS/MND Chapter 2 Section 2.1.1 segment titled "Consistency with State, Regional, and Local Plans and Programs" discloses that the Project is located within the City SAP, and states that although Caltrans is not a signatory of the City SAP, Caltrans "strives to be consistent with the MSCP [City SAP] guidelines." The Department agrees that the Project should be consistent with the City SAP including, but not limited to, City Land Development Code Biology Guidelines (Biology Guidelines), and Environmentally Sensitive Lands (ESL) regulations. However, the IS/MND does not include additional information or analysis demonstrating the IS/MND's consistency with the City SAP nor does it provide sufficient detail for reviewers to ascertain how consistency with the City SAP will be achieved. The Department recommends the IS/MND be revised to include a detailed description of the City SAP requirements and the measures that Caltrans would take to achieve consistency. 3-1
2. Aerial imagery indicates areas of undeveloped lands that could provide habitat for sensitive species are adjacent to the Project footprint and were not included in the BSA. The Department recommends the Lead Agency revise the BSA to include any potential habitat within 300 feet of the Project footprint and/or provide a discussion of the reasons for excluding such lands. 3-2
3. The Biology Guidelines provide the baseline biological standards for developments within ESL. ESL includes those lands with sensitive biological resources, steep hillsides, 3-3

Olga Estrada, Chief  
California Department of Transportation District 11  
November 6, 2018  
Page 3 of 3

coastal beaches, sensitive coastal bluffs, and special flood hazards (see San Diego Municipal Code § 143.0110) often occurring within MHPA. To maintain consistency with the City SAP, Caltrans should at minimum implement the baseline biological standards. Therefore, in accordance with the City SAP, the Department recommends the following:

- a. The Lead Agency should revise the BSA to include all potential Cooper's hawk nesting habitat extending at least 300 feet from the Project boundary. 3-4
- b. According to the Biology Guidelines, "Surveys, for state or federally listed sensitive or MSCP-covered species older than 24 months must be updated, as appropriate, to accurately reflect resources on site. Surveys should be done at the appropriate time of year to detect presence/absence of sensitive species." The most recent surveys reported for the Project were conducted in 2015. The Department recommends that surveys for all sensitive species likely to occur within the Project footprint and within a minimum 300-foot indirect impact area buffer be conducted in the appropriate season within 24 months of circulating the environmental document. 3-5

The Department appreciates the cooperation of Caltrans in protecting sensitive biological resources. Thank you for the opportunity to comment on the IS/MND. If you have any questions, please contact Simona Altman at (858) 467-4283 or [Simona.Altman@wildlife.ca.gov](mailto:Simona.Altman@wildlife.ca.gov).

Sincerely,



Gail K. Sevens  
Environmental Program Manager  
South Coast Region

Enclosures: Figure 1 and Figure 2

cc: State Clearinghouse, Sacramento  
Simona Altman, California Department of Fish & Wildlife  
Sally Brown, U.S. Fish and Wildlife Service, [sally\\_brown@fws.gov](mailto:sally_brown@fws.gov)

**References**

City of San Diego, March 1997. Multiple Species Conservation Program, City of San Diego Subarea Plan. City of San Diego Community and Economic Development Department.

City of San Diego, 2012. San Diego Municipal Code Land Development Code—Biology Guidelines. Amended April 23, 2012.



Figure 1 Project Area and MHPA

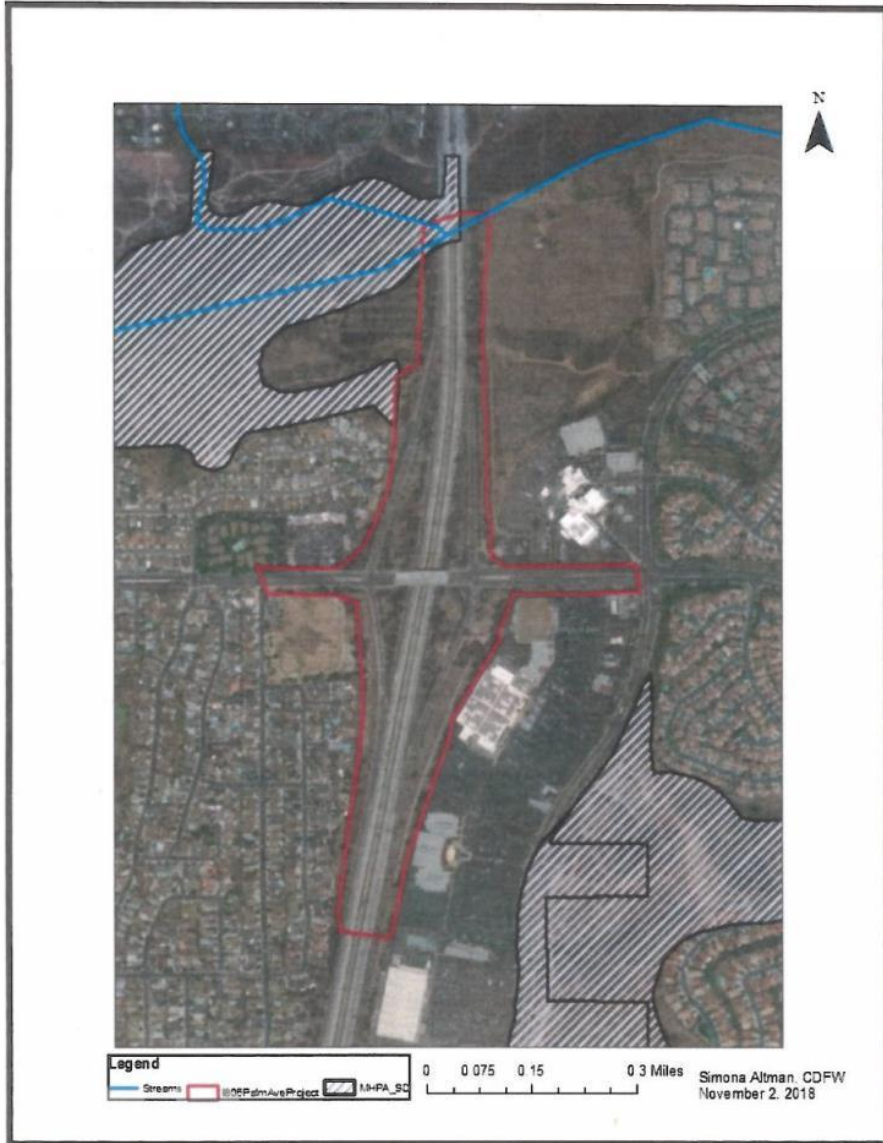
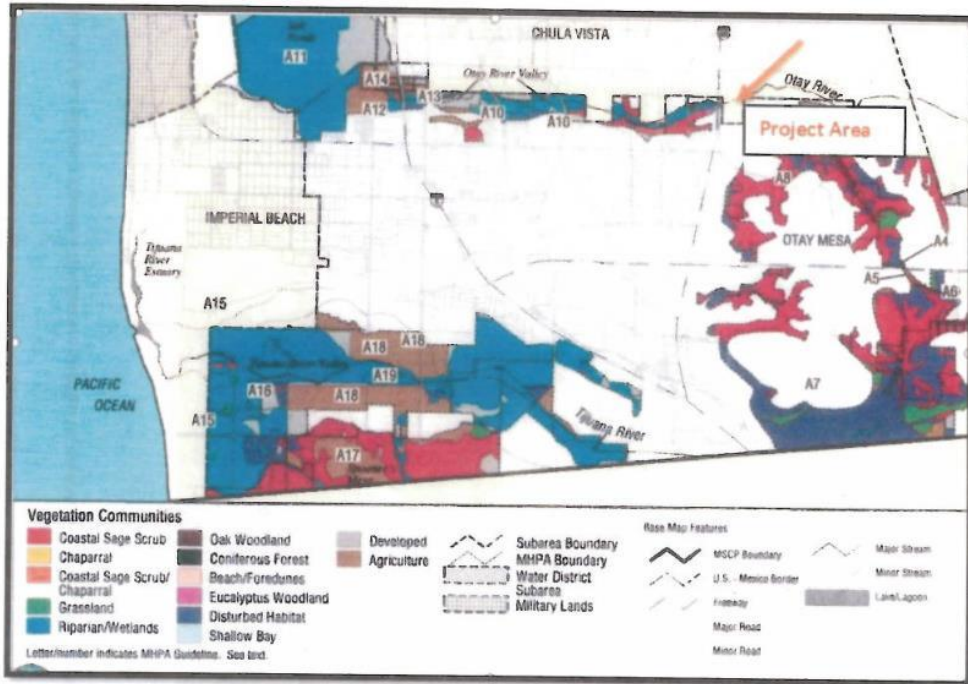


Figure 2 MHPA





### **Response to Comment 3-1**

As stated on page 37 of the Draft IS/EA and acknowledged by the CDFW, Caltrans is not a signatory of the MSCP; however, “strives to be consistent with the MSCP [City SAP] guidelines.” The comment does not raise an issue regarding the adequacy of the Draft IS/EA; therefore, no further response is required or provided.

### **Response to Comment 3-2**

While a portion of the existing Right-of-Way and proposed Project extends within the Multi Habitat Planning Area (MHPA) boundary, the area consists of the existing Right-of-Way for I-805 and is developed. This overlapping area is also within the construction buffer for the proposed Project; however, there would be no direct physical alteration or disturbance. Consequently, there would be no modification to the existing Right-of-Way entitlement within this portion of the proposed Project. There would also be no alteration or direct impacts to the streams depicted in the figure provided by the CDFW (see CDFW Figure 1, page 249 of this document) nor the 100-year floodplain associated with the depicted streams. Furthermore, no take authorization under the City SAP would be required for the proposed Project.

Section 1.4, “Land Use Considerations” of the City SAP states that roads within the MHPA which comply with road-specific construction and maintenance policies are generally considered to be compatible with the biological objectives of the City SAP and are considered to be allowable use within the MHPA.

The proposed Project is subject to the MHPA land use adjacency guidelines that address potential indirect effects to the MHPA and include the following issue areas: 1) drainage; 2) toxics; 3) lighting; 4) noise; 5) barriers; 6) invasive species; 7) brush management; and, 8) grading/land development.

A discussion of applicable land use adjacency guidelines and how consistency will be achieved is provided by the Draft IS/EA on page 157 under “CEQA Considerations”. The Draft IS/EA discusses that land uses adjacent to the MHPA will be managed to ensure minimal impacts by adhering to the applicable land use adjacency guidelines. The proposed Project is not subject to lighting or residential development brush management issues described in the guidelines. Temporary habitat disturbance from grading and project development will be minimized by restoration and mitigation of the disturbed area after construction completion. Issues related to drainage, toxics, and invasive species will be addressed through the implementation of Caltrans pre- and post-construction stormwater BMPs. In addition, project designs and specifications incorporate features that are consistent with guidelines and address issues related to noise and barriers through compliance with City noise ordinances during construction and the inclusion of the manufactured slopes within the development footprint. Impacts to coastal sage scrub that have been identified in the Draft IS/EA do not occur within the MHPA boundary. The 0.3-acre patch of coastal sage scrub that is anticipated to be impacted by construction is along the Caltrans Right-of-Way in the northeast quadrant of the Project.

In response to this comment, the text of the Draft IS/EA has been revised to provide further clarification on how consistency will be achieved. Reference page 195 of this IS/EA for these changes.

### **Response to Comment 3-3**

The Natural Environment Study (NES) defines the BSA as the footprint of all proposed bridge structures, on- and off-ramps, as well as the areas between the on- and off-ramps known as the “gores”. General surveys were carried out within the general BSA as well as two study areas

outside of the general BSA protocol-level surveys were also carried out within one of the study areas outside of the general BSA for least Bell's vireo.

Chapter 2, "Study Methods" on page 13 of the NES describes the methods employed to evaluate potential biological resource issues and associated impacts. These methods include a review of special species lists, databases, general and protocol-level surveys, and a regional evaluation of the potential for special status species occurrence within the Project vicinity.

Undeveloped areas that could provide habitat for sensitive species that are located outside of the BSA would not be directly disturbed during construction. The potential for occurrence of sensitive wildlife species in the vicinity of the proposed Project, including within 300 feet of the project, has been adequately evaluated with findings summarized in the regional evaluation presented in Appendix C of the NES. As such, we believe additional mapping of potential habitats within 300 feet of the project footprint is not warranted at this time because it would not result in changes to the existing regional evaluation presented in Appendix C of the NES and/or the biological resource impact conclusions.

The NES identifies the potential for nesting birds to occur in the vicinity of the proposed Project that could be indirectly affected by construction noise. Avoidance, Minimization, and/or Mitigation Measures (AMMMs [as corrected]), including the avoidance of construction during nesting season, performance of preconstruction nesting surveys within a 500-foot buffer of the proposed Project prior to any vegetation removal, and biological monitoring during construction activities. The implementation of these measures would adequately avoid any potential impacts to biological resources related to construction disturbance. Please refer to page 179 and AMMM AS-2 in **Appendix C** of this IS/EA for the changes to the Environmental Commitments Record (ECR).

#### **Response to Comment 3-4**

Cooper's hawk is protected under the Migratory Bird Treaty Act (MBTA). As discussed in Attachment C of Appendix D in the NES, Cooper's hawk was observed in the vicinity of the Project during field surveys; however, no nests were noted.

The "Impacts to Species covered by the Migratory Bird Treaty Act" section on page 178 of the Draft IS/EA indicates that impacts to nesting birds protected by the MBTA could occur if work is conducted during the breeding season.

Section 2.3.3, "Animal Species" on page 179 of the Draft IS/EA includes the following AMMMs:

- Removal of vegetation will occur outside of the breeding season for birds. However, if a preconstruction nesting survey determines that nesting birds do not occur in the vicinity of the site (typically 300 feet for passerine birds and 500 feet for raptors), removal of vegetation can occur within the breeding season for avian species.
- If vegetation removal is to occur from January to February 14, a preconstruction nesting bird survey for raptors and other early nesting species will be conducted. If a nest is found, methods will be implemented to avoid impacts. This will consist of a no-work buffer zone placed around the nest until the adults are no longer using it or the young have fledged. The specific buffer width will be determined by a qualified biologist at the time of discovery. These will vary based on site conditions and type of work to be conducted.

The Draft IS/EA erroneously reported the raptor breeding season as January to February 14. The breeding season has been corrected to identify January 15 to August 31 as the raptor

breeding season. This change did not result in any change in the impact findings, create any new unavoidable significant impacts, or require any new mitigation measures.

Because we assume the presence of the nesting MBTA species in the vicinity of the Project site, disclosed potential significant effects to these species, and identified appropriate AMMMs (*as corrected*) to avoid significant impacts, we believe additional mapping of Cooper's hawk habitat is not warranted at this time. Please refer to page 179 and AMMM AS-2 in **Appendix C** of this IS/EA for the changes to the ECR.

### **Response to Comment 3-5**

The CDFW has noted that, according to the City of San Diego's Biology Guidelines, "surveys, for state or federally listed sensitive or MSCP-covered species older than 24 months old must be updated, as appropriate, to accurately reflect resources on site. Surveys should be done at the appropriate time of year to detect presence/absence of sensitive species." Since the most recent surveys reported for the Project were conducted in 2015, the CDFW has recommended that the surveys for all sensitive species likely to occur within the Project footprint be conducted in the appropriate season within 24 months of circulating the Environmental Document.

Chapter 2, "Study Methods" on page 13 of the NES describes the methods employed to evaluate potential resource issues and associated impacts. General biological surveys were conducted in 2010 and 2015 for all sensitive species likely to occur within the Project footprint. Additional protocol-level surveys were performed in 2015 to further investigate specific special status species in the area. Furthermore, several methods have been employed to evaluate potential changed conditions since the 2015 survey efforts and subsequent preparation of the NES report:

- A species list was obtained from USFWS in 2017, and was included in the Draft IS/EA. This list was considered in the evaluation of potential environmental effects in the Draft IS/EA.
- A species list was obtained from the USFWS- Information for Planning and Consultation (IPaC) in 2018. This list was considered during the evaluation of potential environmental effects in the Draft IS/EA.
- An updated species list was obtained from USFWS-IPaC on April 26, 2019 and is included in **Appendix F** of the Final Environmental Document. No changes were made to the species listed by the USFWS and the status of the listed species did not change.
- A species list was obtained from NOAA Fisheries Service for threatened or endangered species within the Imperial Beach Quadrangle. This list is also included in **Appendix F** of this document. No critical habitat or essential habitat exist within the Project limits.

The City of San Diego's Biology Guidelines are recommendations rather than State or Federal mandates and are intended to assist with evaluations of potentially significant environmental effects. We believe that a good faith effort has been demonstrated and sufficient information exists to adequately identify potential impacts to biological resources that may occur as a result of Project implementation. As such, additional surveys are not warranted at this time.

In addition, AMMMs (*as corrected*) describe on pages 175 and 179 of the Draft IS/EA include conducting preconstruction surveys of the Project area and surrounding 500-foot buffer prior to any vegetation removal and biological monitoring during construction activities. The implementation of this effort would avoid any potential impacts to biological resources. Please refer to page 179 and Measure AS-2 in **Appendix C** of this IS/EA for the changes to the ECR.

## 5 Chapter 5 – List of Preparers

The following Caltrans staff, City staff, and consultants contributed to the preparation of this IS/MND EA/FONSI.

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## 6 Chapter 6 – Distribution List

The following agencies, organizations, and individuals received printed or electronic copies of the document. Agencies, organizations, and individuals on the project mailing list were notified of the availability of this document and public meetings as described in Chapter 4.0, Comments and Coordination.

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Pine Valley, CA 91962

Mesa Grande Band of Mission Indians  
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Santa Ysabel, CA 92070

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Valley Center, CA 92082

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Chula Vista Learning Community Charter  
High School  
314 Park Way  
Chula Vista, CA 91910

Finney, Myrtle S. Elementary School  
3950 Byrd Street  
San Diego, CA 92154

Howard Pence Elementary School  
877 Via Tonga Ct.  
San Diego, CA 92154

Imperial Beach Adult Center  
170 Palm Ave  
San Diego, CA 92154

Ocean View Hills School  
4919 Del Sol Blvd.  
San Diego, CA 92154

Otay Mesa-Nestor Library  
3003 Coronado Ave.  
San Diego, CA 92154

Juarez Lincoln Elementary School  
849 Twining Avenue  
Chula Vista, CA 92154

Los Altos Elementary School  
1332 Kenalan Dr.  
San Diego, CA 92154

Montgomery High School  
3250 Palm Ave  
San Diego, CA 92154

Montgomery Middle School  
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Silver Wing Elementary School  
3730 Arey Dr.  
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Chevron Gas Station  
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AMC Classic Palm Promenade 24  
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San Diego, CA 92154

ARCO Station  
4604 Palm Avenue  
San Diego, CA 92154

Carl's Jr.  
614 Dennery Road  
San Diego, CA 92154

The Home Depot  
950 Dennery Road  
San Diego, CA 92154

Home Town Buffet  
930 Dennery Road  
San Diego, CA 92154

Kaiser Permanente Otay Mesa Medical  
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San Diego, CA 92154

KFC  
4380 Palm Avenue  
San Diego, CA 92154

McDonald's  
4350 Palm Avenue  
San Diego, CA 92154

Montgomery Plaza Shopping Center  
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Palm Ridge Shopping Center  
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Property Owner  
4396 Bayberry Court  
San Diego, CA 92154

Property Owner  
4393 Bayberry Court  
San Diego, CA 92154

Property Owner  
4391 El Cedro Court  
San Diego, CA 92154

Property Owner  
4396 El Cedro Court  
San Diego, CA 92154

Property Owner  
4390 El Cedro Court  
San Diego, CA 92154

Property Owner  
4397 Zinnia Court  
San Diego, CA 92154

Property Owner  
4394 Zinnia Court  
San Diego, CA 92154

Property Owner  
4388 Zinnia Court  
San Diego, CA 92154

Property Owner  
4397 Crabapple Court  
San Diego, CA 92154

Property Owner  
4396 Crabapple Court  
San Diego, CA 92154

Property Owner  
4392 Crabapple Court  
San Diego, CA 92154

Property Owner  
4439 Powderhorn Drive  
San Diego, CA 92154

Property Owner  
4490 Murietta Circle  
San Diego, CA 92154

Property Owner  
4480 Murietta Circle  
San Diego, CA 92154

Property Owner  
4470 Murietta Circle  
San Diego, CA 92154

Property Owner  
4460 Murietta Circle  
San Diego, CA 92154

Property Owner  
4450 Murietta Circle  
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San Diego, CA 92154

The Landing at Ocean View Hills  
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San Diego, CA 92154

RiverEdge Terrace Apartments  
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## List of Technical Studies

I-805/Palm Avenue Interchange Improvements Project Community Impacts Assessment (CIA), June 30, 2017

Traffic Operational Analysis, I-805/Palm Avenue Interchange (Traffic Study), July 2014.

Memorandum: Traffic Evaluation for Palm Avenue at I-805 Ramps with Class IV Bikeways, January 17, 2017

Preliminary Transportation Management Plan, Palm Avenue Bridge Widening and Interchange Improvements at I-805, July 19, 2017

Visual Impact Assessment, Interstate 805/Palm Avenue Interchange Improvements, August 16, 2017

Historic Property Survey Report (HPSR), July 24, 2017

Archaeological Survey Report for the Interstate 805/Palm Avenue Interchange Improvements Project San Diego, California, March 2017

I-805/Palm Avenue Interchange Project Post Mile (PM) 2.899 Drainage Report, January 6, 2016

Long-Form Stormwater Data Report (SWDR), July 19, 2017

Initial Site Assessment Interstate 805 and Palm Avenue, San Diego County, California, April 15 2011 (ISA 2011)

Initial Site Assessment Report Update, Interstate 805 and Palm Avenue Interchange Project, San Diego County, California, March 19, 2018

Structure Preliminary Geotechnical Report, Interstate 805/Palm Avenue Interchange Improvements, Bridge No. 57-775, San Diego, California, May 3, 2011

Paleontological Report/ Paleontological Evaluation Report & Paleontological Mitigation Plan – Interstate 805/Palm Avenue Interchange Project, City of San Diego, San Diego County, California

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I-805/Palm Avenue Interchange Project Greenhouse Gas Analysis Memorandum, July 12, 2017

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# APPENDIX A.

SECTION 4(f) DE MINIMIS DETERMINATION

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## **Interstate 805/Palm Avenue Interchange Improvements**

### **SECTION 4(F) *De Minimis* Determination**

Submitted Pursuant to:

23 USC 327

THE STATE OF CALIFORNIA

Department of Transportation as assigned

JUNE 2019

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 USC 327.

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## 1.0 Introduction

The following discusses existing properties within and adjacent to the proposed Interstate 805 (I-805) and Palm Avenue Interchange Project (Project) that may warrant protection under Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966. The properties were evaluated for potential use by the proposed project, as defined by 23 Code of Federal Regulations (CFR) 774.17.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project are being, or have been, carried-out by California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to 23 U.S. Code (USC) 327.

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC. 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of property.

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

A “use” of properties protected under Section 4(f) may be “permanent”, “temporary”, or “constructive.”

A *permanent* use of a Section 4(f) resource occurs when property is permanently incorporated into a proposed transportation facility. This might occur as a result of partial or full acquisition, permanent easements, or temporary easements that exceed limits for temporary use, as noted below.

A *temporary use* of a Section 4(f) resource occurs when the property is not permanently incorporated into a transportation facility, but there is a temporary occupancy of property that is considered adverse in terms of the preservationist purposes of the Section 4(f) statute. Section 23 CFR 774.13(d) provides the conditions under which “temporary occupancies of land...are so minimal as to not constitute a use within the meaning of Section 4(f).” A temporary occupancy of property does not constitute a use of a Section 4(f) resource when all of the following conditions are satisfied:

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property;
- The scope of work must be minor, with only minimal changes to the protected resource;
- There must be no permanent adverse physical impacts on the protected resource or temporary or permanent interference with activities or purpose of the resource;
- The property being used must be fully restored to a condition that is at least as good as existed prior to the proposed action; and
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

If one or more of the conditions for the exception cannot be met, then the Section 4(f) property is considered used by the project even though the duration of on-site activities is temporary. Written agreement by the official(s) with jurisdiction over the property with respect to all the conditions is necessary and should be retained in the project file. Assurances that documentation will eventually be obtained via subsequent negotiations are not acceptable. Also, it is typical that the activity in question will be detailed in project plans as an integral and necessary feature of the project.

A *constructive use* of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from a protected resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual, access, ecological) that are so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made through the following:

- Identifying the current activities, features, or attributes of the resource that may be sensitive to proximity impacts;
- Analyzing the potential proximity impacts on the resource; and
- Consulting with the appropriate officials having jurisdiction over the resource.

This section of the document discusses *de minimis* impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This amendment provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) *de minimis* findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including *de minimis* impact determinations, as well as coordination

with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

## **1.0 Project Description**

### **2.1 Project Characteristics**

The I-805/Palm Avenue Interchange Project (Project) is located in the City of San Diego, in San Diego County, California. The Project proposes to increase the capacity of the existing interchange within the City of San Diego to address the increase in traffic that has occurred and is expected to occur by 2040.

Project work would include widening the existing overcrossing, adding one through lane in the eastbound direction on the bridge, and widening and realigning the I-805 ramps and approach roadways. Both build alternatives evaluated include a sidewalk and a Class IV Separated Bikeway bicycle facility on each side of the Palm Avenue bridge over I-805. A Class IV Separated Bikeway is defined as "a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking" (Caltrans 2015 Design Information Bulletin Number 89).

### **2.2 Project Alternatives**

The two build alternatives are Alternative 1 + IV (One Quad Partial Cloverleaf with Class IV Separated Bikeway), and Alternative 2 + IV (Spread Diamond with Class IV Separated Bikeway).

Alternative 1 + IV would widen the Palm Avenue bridge to provide additional lanes, add a new loop ramp on eastbound Palm Avenue for access to I-805 north, and widen various ramps and roadway approaches to provide additional turn lanes. The existing I-805 north off-ramp would be realigned for the new loop ramp. Eastbound Palm Avenue would be widened into the park slope to accommodate a Class IV Separated Bikeway and a dedicated right turn lane to I-805 south, and a retaining wall would be constructed along the excavated edge of Palm Ridge Neighborhood Park.

Alternative 2 + IV also would widen the Palm Avenue bridge and various ramps and roadway approaches to increase capacity. This alternative would not add a new loop ramp but would provide longer turn lane pockets on the bridge than existing. Eastbound Palm Avenue would be widened into the park slope to accommodate a Class IV Separated Bikeway and a dedicated right turn lane to I-805 south, similar to Alternative 1 + IV, but the retaining wall would be higher and a wider strip of park slope would be removed because of the slightly different alignment of the widened roadway for Alternative 2 + IV.

## 2.3 Purpose and Need for the Project

The primary purpose of the proposed Project is to improve traffic operations along this segment of Palm Avenue by reducing intersection delay at freeway ramps and increasing turn lane storage lengths to prevent conflicts between turn and through movements. The Project is needed because future increases in traffic volumes are projected to result in excessive delays for turn movements along Palm Avenue at streets, driveways, and freeway ramps. Refer to the Purpose and Need section in Chapter 1 of the Draft Initial Study/Environmental Assessment (IS/EA) for more information.

## 2.0 Discussion of Properties

Field reconnaissance and reviews of applicable local plans were used to identify resources in the vicinity of the proposed project that could potentially be subject to evaluation under Section 4(f). All potential Section 4(f) properties within 0.5-mile of the project were identified. It should be noted that no wildlife or waterfowl refuges are located within the 0.5-mile radius of the site. In addition, as noted within the Historic Properties Survey Report (HPSR) prepared for the proposed Project, there are no critical historic or archaeological resources within the Area of Potential Effects (APE) that are of national, State, or local significance. As such, the discussion below focuses on recreational facilities in the project area.

The City of San Diego, County of San Diego, and City of Chula Vista are the public entities that control publicly-owned recreational lands and facilities in the vicinity of the project. **Table 1**, *Potential Section 4(f) Resources Within One Half Mile of the Project*, lists both the publicly and privately owned recreational facilities that are located within a one-half mile radius of the project. The table lists the location and characteristics of each facility, if said facility qualifies for Section 4(f), and if the project would result in a use of the resource. Refer to **Figure 1**, *Potential 4(f) Resources in the 4(f) Study Area*. These facilities were evaluated for their eligibility for Section 4(f) protection.



Figure 1  
Potential 4(f) Resources in the 4(f) Study Area

**Table 1 Potential Section 4(f) Resources Within One Half Mile of the Project**

<b>Facility</b>	<b>Location/ Distance from Project Site</b>	<b>Ownership</b>	<b>Public/ Private</b>	<b>Nature and Use</b>	<b>4(f) Resource?</b>	<b>Section 4(f) "Use" by Project?</b>
Palm Ridge Neighborhood Park	Within the Project footprint; 751 Firethorn Street	City of San Diego	Public	Park	Yes	Yes
Otay Valley Regional Park	Adjacent to Caltrans Right-of-Way at the northwest corner of the project; 2155 Beyer Blvd.	Jointly owned and managed by County of San Diego and Cities of San Diego and Chula Vista	Public	Park	Yes	No
Ocean View Hills Neighborhood Park	0.3-mile east of the project footprint; 4947 Ocean View Hills Parkway	City of San Diego	Public	Park	Yes	No
Silver Wing Neighborhood Park and Recreation Center	0.7 mile southwest of the project footprint; 3737 Arey Drive	City of San Diego	Public	Park and Recreation Center	Yes	No
Juarez Lincoln Elementary School	0.2 mile southwest of the project footprint; 849 Twining Avenue	Chula Vista Elementary School District	Public	School Playground	No	N/A
Myrtle S. Finney Elementary School	0.5 mile northwest of the project footprint; 3950 Byrd Street	Chula Vista Elementary School District	Public	School Playground	Yes	No
Silver Wing Elementary School	0.7 mile southwest of the project footprint; 3730 Arey Drive	Chula Vista Elementary School District	Public	School Playground	No	N/A



### **3.1 Resources Not Protected by Section 4(f)**

As discussed in the Introduction, to qualify as Section 4(f) resources, the identified properties would have to meet the legal definition, i.e., “publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site)”. Of the properties that were identified as potential Section 4(f) resources in **Table 1**, six were determined not to be triggered by the Section 4(f) provisions, and only one was determined to be a Section 4(f) use by the Project.

#### 3.1.1 Otay Valley Regional Park

Otay Valley Regional Park is a major open space, multi-jurisdictional facility involving the County of San Diego and the Cities of San Diego and Chula Vista. This regional park is publicly owned and open to the public year-round from sunrise to sunset. Therefore, the property is protected under Section 4(f). The southern boundary of Otay Valley Regional Park is adjacent to Caltrans Right-of-Way at the northernmost extent of the Project. In this area, Project activities on the west side of the freeway would occur along the I-805 south off-ramp entirely within Caltrans Right-of-Way, and the Project would not require temporary or permanent use of regional park land. Also, proximity impacts from construction will not substantially impair the protected activities, features, or attributes of the park. Therefore, the provisions of Section 4(f) are not triggered.

#### 3.1.2 Ocean View Hills Neighborhood Park

Ocean View Hills Neighborhood Park is publicly owned and open to the public, so the property is protected under section 4(f). The park is located at 4947 Ocean View Hills Parkway, more than 1,500 feet east of the easternmost extent of Project construction. The Project would not require temporary or permanent use of park land, and construction activities would not occur in proximity to the park. Therefore, the provisions of Section 4(f) are not triggered.

#### 3.1.3 Silver Wing Neighborhood Park and Recreation Center

Silver Wing Neighborhood Park and Recreation Center is publicly owned and open to the public, so the property is protected under Section 4(f). The park is located at 3737 Arey Drive, approximately 3,900 feet southwest of the westernmost extent of project construction. The Project would not require temporary or permanent use of park land, and construction activities would not occur in proximity to the park. Therefore, the provisions of Section 4(f) are not triggered.

#### 3.1.4 Juarez Lincoln Elementary School

Juarez-Lincoln Elementary School recreational facilities are located at 849 Twining Avenue, approximately 1,090 feet southwest of the westernmost extent of project construction. The school is publicly owned, but the playground area is not open to the public, so these facilities are not protected by section 4(f). In addition, the Project would not require temporary or permanent use of these facilities, and construction activities would not occur in proximity to the school’s recreational facilities. Therefore, the provisions of Section 4(f) are not triggered.

### 3.1.5 Myrtle S. Finney Elementary School

Myrtle S. Finney Elementary School recreational facilities are located at 3950 Byrd Street, approximately 2,400 feet northwest of the westernmost extent of project construction. The school is publicly owned, and the playground area is open to the public after school until the evening, so the property is protected under Section 4(f). The Project would not require temporary or permanent use of these facilities, and construction activities would not occur in proximity to the school's recreational facilities. Therefore, the provisions of Section 4(f) are not triggered.

### 3.1.6 Silver Wing Elementary School

Silver Wing Elementary School recreational facilities are located at 3730 Arey Drive, approximately 3,900 feet southwest of the westernmost extent of project construction. The school is publicly owned, but the playground area is only available after school hours by special permitted arrangement, so these facilities are not protected by Section 4(f). In addition, the Project would not require temporary permanent use of these facilities, and construction activities would not occur in proximity to the school's recreational facilities. Therefore, the provisions of Section 4(f) are not triggered.

## 3.2 **No Section 4(f) Use – Temporary Occupancy**

For both build alternatives, an approximately 25-foot-long segment of the water pipeline that runs along the eastern side of the park would be relocated eastward at the boundary with Caltrans Right-of-Way. The relocation would require a temporary construction easement at this corner that has no active recreational facilities. Construction in this area would last for approximately 3 months. Construction activities would involve trenching, pipeline installation, backfilling, finishing earthwork, and landscaping. Most of the construction activity would occur in Caltrans Right-of-Way, thus impacts to trees in Palm Ridge Neighborhood Park would be avoided in the case of both Build Alternatives. For Alternative 2 + IV, a small area of permanent easement totaling 0.08 acre would be needed over the new location of the relocated pipeline segment in the park to limit future construction and tree planting along the slightly longer pipeline alignment. Per the criteria for temporary occupancy noted in the introduction, the relocation of the waterline meets all of the criteria to be qualified for temporary occupancy and Section 4(f) does not apply. **Table 2** shows the anticipated temporary occupancy at Palm Ridge Neighborhood Park for both Build Alternatives.

There would be no permanent changes to the park for the relocation of the water pipeline. After the pipeline work is completed, this part of the park would return to its existing condition. There are no anticipated changes to access, vegetation, wildlife, air quality, noise, visual quality, or water quality from the pipeline relocation. The use for the water pipeline relocation would not impact the walking path/sidewalk or any other activity areas in the park. The temporary use of this area for pipeline relocation would not affect any vital functions that support the park's ability to function as a 4(f) resource.

**Table 2 Comparison of Anticipated Temporary Occupancy at Palm Ridge Neighborhood Park for Waterline Relocation**

Factor	Alternative 1 + IV	Alternative 2 + IV
Area of permanent easement for water pipeline	0 acre	0.08 acre

**3.3 Section 4(f) Use – Palm Ridge Park**

Palm Ridge Neighborhood Park is located along eastbound Palm Avenue between Firethorn Street and I-805. As shown in the General Development Plan for Palm Ridge Park (**Figure 2**), the improved area for the park covers approximately 8 acres. The park is at the western edge of the Project area as shown in **Figure 1**.

The land for Palm Ridge Neighborhood Park was acquired by the City of San Diego in 1978, and initial development occurred in 1983. The General Development Plan for Palm Ridge Park (**Figure 2**) illustrates the concepts that were used in designing the park. Although not all plantings illustrated in the General Development Plan were established, the recreational elements envisioned were constructed. Recreational elements include a small children's play area, picnic tables, multi-use courts, two dirt infields, bleachers, and a grass ball field in the middle. Other facilities include a sidewalk that curves around the ball field, a parking lot and a comfort station on the west side of the park, and landscaping around the edges.

The edge of the park adjacent to Palm Avenue is planted with trees for screening. Based on coordination conducted in 2011 with the City of San Diego park planner, no planned activities occur along this edge because there are too many trees and the slope is too steep. However, it is a passive use area where people rest and enjoy the shade. The edge of the park encompassing the multi-use courts, picnic tables, and a children's play area is adjacent to the I-805 south on-ramp on a slope. Overall, the park is used year-round by several youth and adult soccer groups, youth and adult baseball groups, and youth Pop Warner football groups, and is available for open play. The park is also used on a daily basis by local community members. During the spring/summer time, the park usage increases for weekend family celebrations.

In 2010, the park was estimated to have an average daily attendance of 200 people per day. Average daily attendance is estimated to be double or triple during the weekends and/or holidays (City of San Diego, 2010). Visitors are primarily residents of the surrounding neighborhoods.

The proposed Project would result in a permanent easement at Palm Ridge Park. This permanent easement would constitute a Section 4(f) use.

**3.3.1 Impacts**

The potential impacts to Palm Ridge Neighborhood Park from both build alternatives of the proposed Project would occur within two areas. One area is the edge of the park parallel to eastbound Palm Avenue. Along this edge, the existing slope would be removed and a vertical retaining wall would be constructed to provide an eastbound Class IV Separated Bikeway along the roadway.

The second area is in the northeastern corner of the park on the slope above the I-805 southbound on-ramp, where a short segment of a water pipeline would be relocated. Impacts from Alternative 1 + IV are illustrated in **Figure 3** and impacts from Alternative 2 + IV are illustrated in **Figure 4**. Impacts are compared in **Table 3** and discussed further below.

For Alternative 1 + IV, the retaining wall is anticipated to be a maximum of approximately 10 feet high and would extend for approximately 230 feet along the park edge from the corner of Caltrans Right-of-Way to just east of where the sidewalk in the park meets the sidewalk along Palm Avenue. The strip of park land removed from the park slope would be a maximum of about 20 feet wide. An additional area about 35 feet wide between the edge of the proposed wall and the park sidewalk that curves around the ball field would be needed for a temporary construction easement. The new retaining wall is anticipated to be a soldier pile wall. Construction for the new retaining wall would be conducted from the top down and include drilling the soldier pile holes, installing the piles, installing the timber lagging and excavating the slope, installing forms and reinforcement, and pouring concrete. Additional visual aesthetic treatments would also be added to the wall.

For Alternative 2 + IV, the retaining wall would be a maximum of approximately 17 feet high and would extend for approximately 250 feet along the park edge from the corner of Caltrans Right-of-Way to where the sidewalk in the park meets the sidewalk along Palm Avenue. The strip of park land removed from the park slope would be a maximum of about 35 feet wide from the back of the sidewalk along Palm Avenue. An additional area about 25 feet wide between the edge of the proposed wall and the park sidewalk that curves around the ball field would be needed for a temporary construction easement. The new retaining wall is anticipated to be a standard Type 1 cantilevered concrete retaining wall founded on spread footings. Construction for the new retaining wall would require a temporary shoring wall which would be conducted from the top down and include excavation, drilling holes, inserting rods (nails) and reinforcement structures. Additional visual aesthetic treatments would also be added to the wall. A small area of permanent easement totaling 0.08 acre would be needed over the new location of the relocated pipeline segment in the park to limit future construction and tree planting along the slightly longer pipeline alignment. This construction would not impact mature trees in the park, nor would it impact any recreation.

For both build alternatives, all of the approximately 13 trees within the sliver for the retaining wall and temporary construction easement would be removed. Park activities within the temporary construction easement would be precluded for approximately 4 months while the wall would be constructed. However, the walking path/sidewalk would not be blocked and the playing fields would not be affected by construction. For Alternative 1 + IV, the area of park land converted to a retaining wall and Class IV Separated Bikeway would be approximately 0.09 acre, which is about 1.1 percent of the total 8-acre park area. For Alternative 2 + IV, the area converted to a retaining wall and Class IV Separated Bikeway would be about 0.14 acre, which is about 1.75 percent of the total park area.

**Table 3 Comparison of Anticipated Impacts/Use to Palm Ridge Neighborhood Park**

<b>Factor</b>	<b>Alternative 1 + IV</b>	<b>Alternative 2 + IV</b>
Maximum wall height	10 feet	17 feet
Wall length in park	230 feet	250 feet
Width of sliver for Class IV <u>Separated Bikeway and wall</u>	20 feet	35 feet
Area of park land converted to Class IV <u>Separated Bikeway and wall</u>	0.09 acre	0.14 acre
Number of trees permanently removed in wall zone	8	12
Number of trees removed in temporary construction easement for wall	5	1
Width of temporary construction easement for wall	35 feet	25 feet
Area of permanent easement for wall	0 acre	0 acre
Total area of permanent use of park land	0.09 acre	0.22 acre
Total percentage of permanent use of park land	1.1 percent	1.75 percent

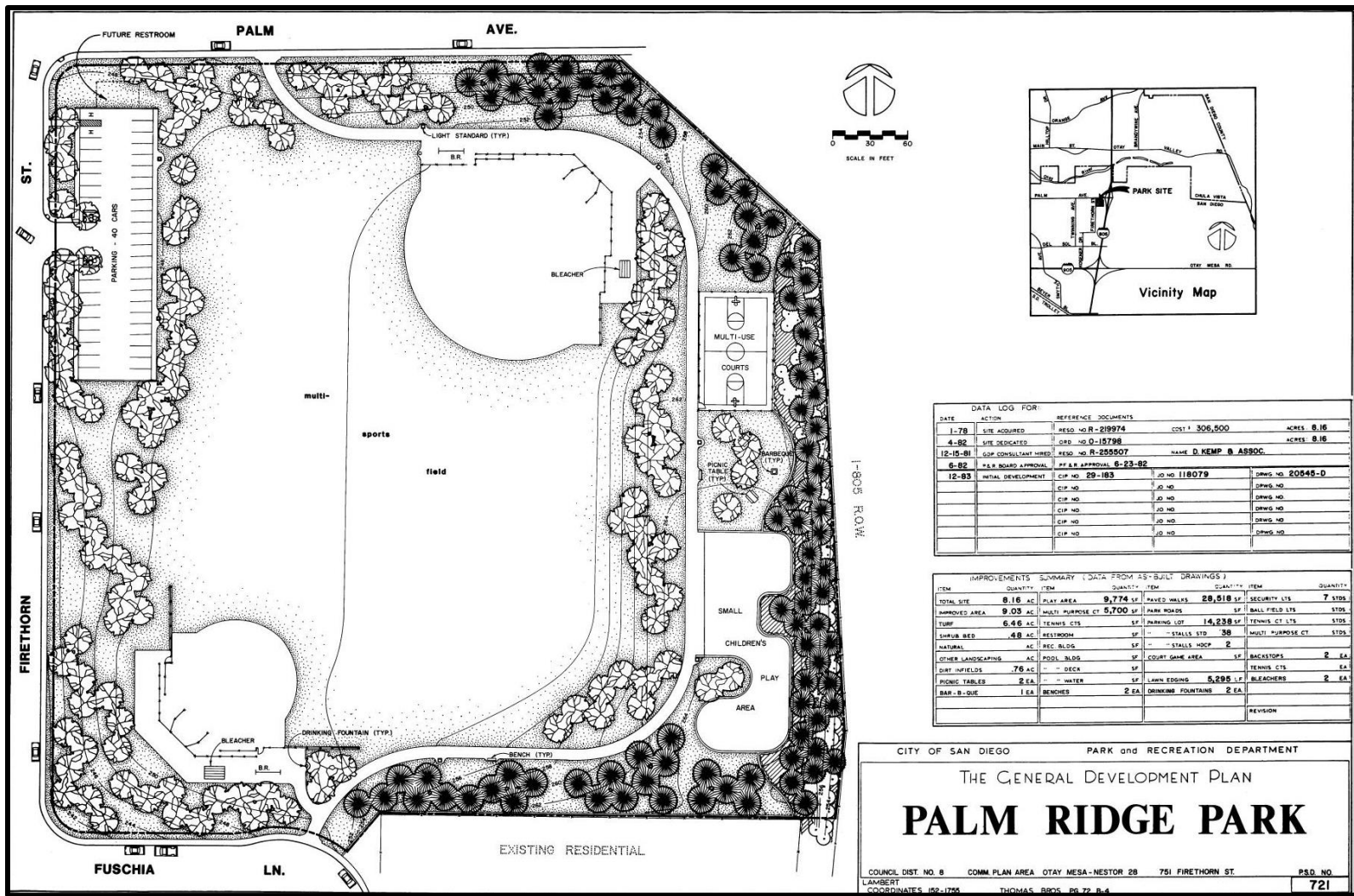
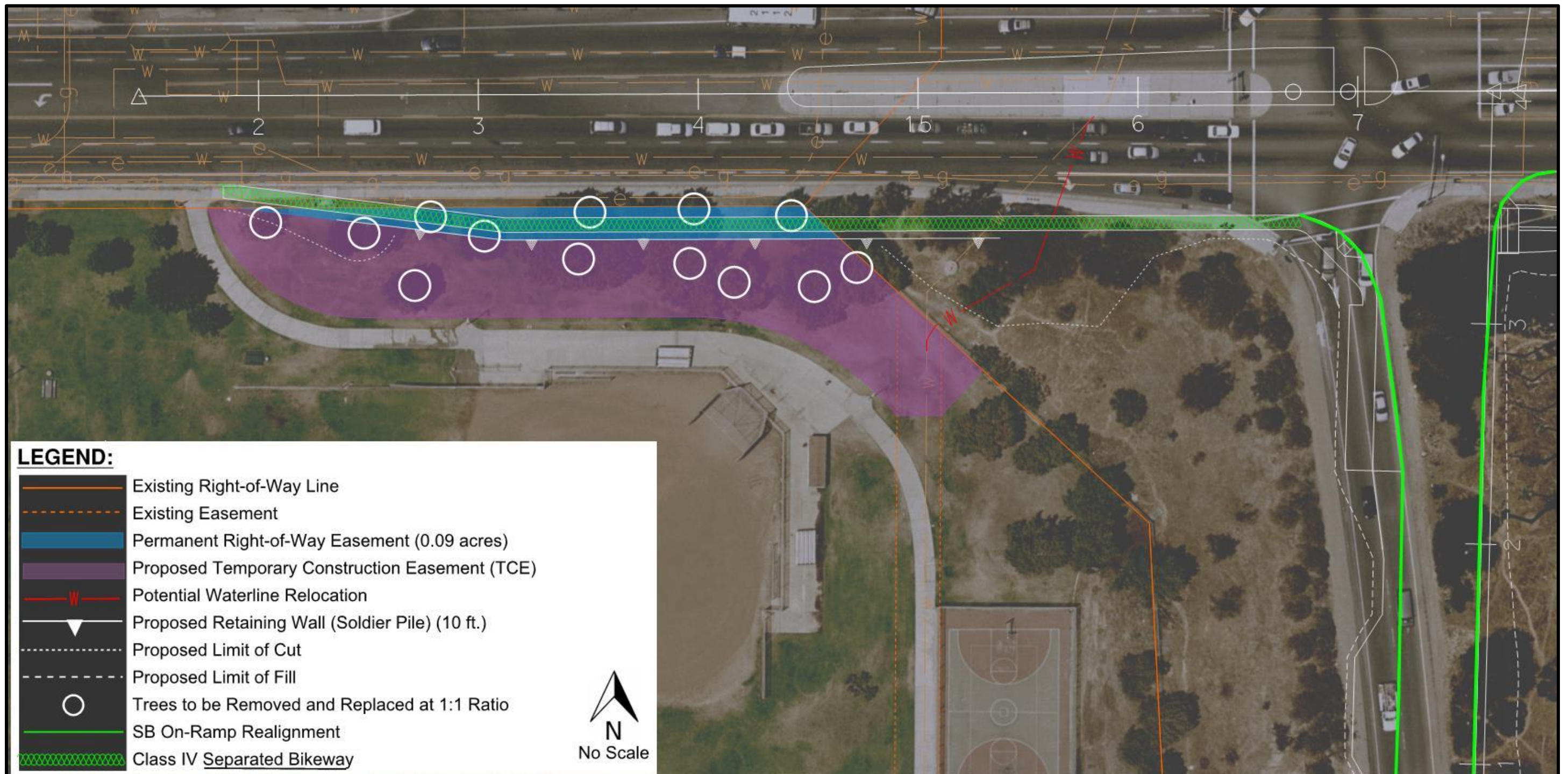


Figure 2  
 General Development Plan for Palm Ridge Park





**Figure 3**  
**Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 1 + IV**



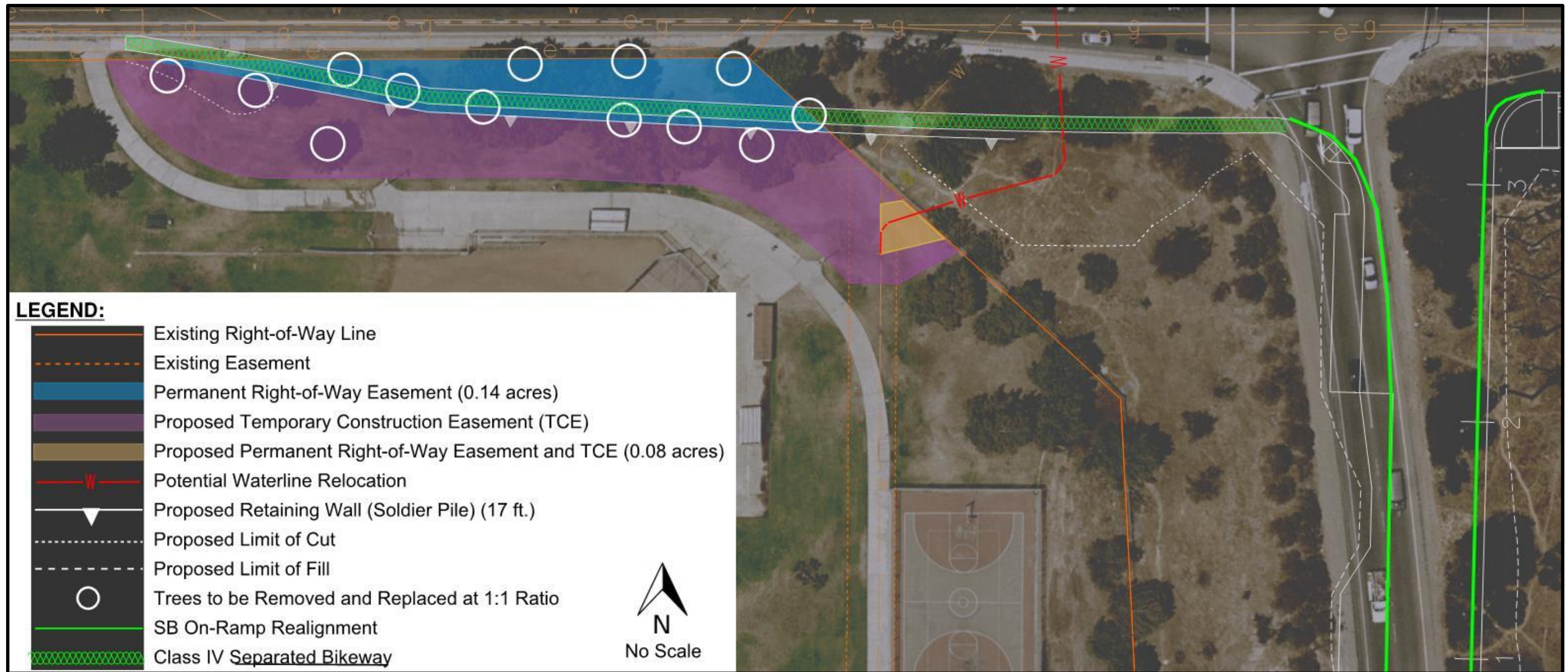


Figure 4  
Proposed Impacts to Palm Ridge Neighborhood Park from Alternative 2 + IV

## 4.0 De Minimis

Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 USC 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. Federal Highway Administration's (FHWA's) final rule on Section 4(f) *de minimis* findings are codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to California Department of Transportation (Caltrans), pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

### 4.1 Section 4(f) Proposed De Minimis Determination

The proposed Project and associated impacts will not adversely affect any of the activities, features, or attributes that qualify the Palm Ridge Neighborhood Park property for protection under Section 4(f). The use of park land for either build alternative would arise from removing a slope area and trees, installing a retaining wall and Class IV Separated Bikeway, and relocating a short segment of water pipeline. There are no anticipated changes to the access, aesthetics/visual quality, or noise in Palm Ridge Neighborhood Park. Access from Palm Avenue would not change because the park is already fenced between the park and the street, and the park would continue to be accessible from the parking lot off of Firethorn Street. Visual quality would be minimally affected, with trees to be replanted at a 1:1 ratio and landscaping restored after construction. Noise would temporarily increase during construction, but the Project would comply with the City of San Diego's noise ordinance. Permanent increases in noise levels in the park are not anticipated to be perceptible. The park's active use areas and recreational functions would remain similar to the existing conditions.

Overall, it is expected that the permanent incorporation of an anticipated maximum of approximately 0.22 acre of land within the Palm Ridge Neighborhood Park would not adversely affect any of the activities, features, or attributes of the park that qualify the resource for protection under Section 4(f) and is proposed as *de minimis*.

A *de minimis* impact determination requires agency coordination and public involvement. For parks, recreation areas, or wildlife and waterfowl refuges, coordination involves informing the official(s) with jurisdiction over the property of the intent to make a *de minimis* impact determination. Then there must be an opportunity for the public to review potential impacts and provide their comments. The *de minimis* impact determination may be finalized only after the official(s) agree (concur) in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. The official(s) must consider any comments received from the public in providing such concurrence. The Section 4(f) public notice and opportunity for comment may be combined with similar actions undertaken as part of the NEPA and CEQA process. These actions may include advertising the notice that a Draft environmental document is available for public review, holding a public meeting after the Draft environmental document has been distributed but before the public

comment period closes, and presenting written comments received from the public in the Final environmental document. Proposed avoidance, minimization, and mitigation or enhancement measures are described in **Section 5.0** of this document.

#### **4.2 Why Impacts Are Proposed De Minimis**

Caltrans asserts that the use of the Section 4(f) resource and any impacts associated with the proposed Project would not adversely affect any of the activities, features, or attributes that qualify the property for protection under 4(f) and is *de minimis*.

Changes to the visual quality of the park resulting from the temporary and permanent loss of trees and slope and the construction of a fence along the top of the wall were determined to be moderate-low to moderate, based on analysis in the Visual Impact Assessment (KTU+A 2017). There are no anticipated changes to access, other vegetation, wildlife, air quality, or water quality. Although Palm Avenue would be widened, there would be no change in noise levels from existing conditions for the build alternatives. Except for the loss of the slope area and trees in that sliver, the park would remain similar to existing conditions. The use for the retaining wall and Class IV Separated Bikeway would not impact the walking path/sidewalk or any other activity areas in the park. The conversion of the slope area to a retaining wall and Class IV Separated Bikeway would not affect any vital functions that support the park's ability to function as a 4(f) resource.

#### **5.0 Avoidance, Minimization, and/or Mitigation Measures**

The following measures would be incorporated into the proposed Project to minimize harm to Palm Ridge Neighborhood Park:

- Trees would be replaced at a 1:1 ratio, with 48" box sized trees. Location and type of trees to be planted within the park would be determined by the City Park and Recreation Department during the final design.
- The Project will include repair and/or replacement of the Palm Ridge Park surface parking lot or another improvement similar in terms of scope and scale benefitting the park and recreation facilities as mitigation. This improvement will be confirmed by the City's Public Works Department and approved by the City's Park and Recreation Department during the design phase.
- The ball field closest to Palm Avenue and adjacent sidewalk will be designated as an Environmentally Sensitive Area (ESA) and will be protected by Temporary ESA fencing during construction.
- Access to the park and parking lot from Firethorn Street will be maintained throughout construction.
- Active Construction will be avoided during special events or times of high park use. The construction schedule will be drafted in coordination with the City's Park and Recreation Department.
- Construction notifications will be posted at the park prior to the start of construction.

- Revegetation within City park land will be completed according to the City of San Diego's Landscape Standards and the Project's revegetation plan in coordination with the City's Park and Recreation Department.

## 6.0 Public Notification Process

The public must be afforded the opportunity to review and comment on the effects of the proposed Project to Palm Ridge Park. The public was given the opportunity to comment during the review period for the Draft IS/EA. Additionally, a public meeting was held on October 24, 2018 from 5:30 p.m. to 7:30 p.m. at the Otay Mesa-Nestor Public Library, 3003 Coronado Avenue, San Diego, CA 92154.

### 6.1 Coordination

The Section 4(f) process requires that the "official(s) with jurisdiction over the property" agree (concur) in writing that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). The officials with jurisdiction for various types of property are defined in 23 CFR 774, which states that for public parks, recreational areas, and wildlife and waterfowl refuges the official(s) with jurisdiction are "the official(s) of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property." In the case of Palm Ridge Neighborhood Park, the City of San Diego Park and Recreation Department is the "official with jurisdiction" because the Park and Recreation Director, and those he so delegates, are authorized by San Diego Municipal Code §22.1502 to be responsible for the control and management of the parks and other recreational facilities owned, controlled, or operated by the City.

A meeting with representatives of the City of San Diego Park and Recreation Department (City Park Department) was held on November 2, 2016. The Project build alternatives and potential park impacts were discussed. City staff were also informed of anticipated temporary impacts due to the relocation of a water pipeline and construction of the new retaining wall.

In addition, City staff representing the City Public Works Department have attended monthly Project Development Team (PDT) meetings throughout Project planning and preliminary design. During these meetings, the status of Palm Ridge Neighborhood Park as a Section 4(f) property, the potential conversion of park land to a Class IV Separated Bikeway, potential impacts, and proposed measures to avoid and/or minimize harm to the park were all discussed.

Discussions with the City Parks Department have been ongoing and are detailed in the Attachments to this Appendix.

A letter seeking concurrence for the *de minimis* findings was sent on January 31, 2018 to the City of San Diego Park and Recreation Department, which constitutes the officials with jurisdiction over Palm Ridge Park. The letter contains the information presented in this document. The City of San Diego provided written concurrence on February 2, 2018.

A final letter seeking concurrence following the public availability of the Draft IS/EA with 4(f) *de minimis* Determination was sent on April 5, 2019 to the City of San Diego Park and Recreation Department. The City of San Diego provided written concurrence on April 8, 2019 and the final letter was signed by Caltrans on April 16, 2019. This concurrence letter can be found in the attachments of this document.



# ATTACHMENTS

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Children's play area on the east side of the park



Multi-use courts on the east side of the park



Bleachers on the west side of the park



Grass ball field in the middle of the park

**Figure 5**  
**Recreational Elements of Palm Ridge Neighborhood Park**



Sidewalk and landscaping on the south side of the park



Parking lot on the west side of the park



Landscaping on the north side of the park



Landscaping and comfort station on the west side of the park

**Figure 6**  
**Other Facilities of Palm Ridge Neighborhood Park**





Park slope parallel to Palm Avenue, looking westward



Park slope parallel to Palm Avenue, looking eastward



Park area affected by pipeline looking southward

**Figure 7**  
**Park Slope Affected by Retaining Wall & Park Area Affected by Pipeline Relocation Looking Southward**

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Final 4(f) *de minimis* Determination and  
Temporary Occupancy Concurrence Letter

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**DEPARTMENT OF TRANSPORTATION**

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*Making Conservation  
a California Way of Life.*

April 5, 2019

Herman Parker  
City of San Diego -Parks and Recreation Department  
202 C Street, MS 37C  
San Diego, CA 92101

Dear Mr. Parker,

The City of San Diego (City) proposes to improve the Interstate 805 (I-805)/Palm Avenue interchange. The I-805/Palm Avenue Interchange Improvement Project (Project) would increase capacity at this interchange in order to reduce congestion from existing and projected future local traffic. There are two build alternatives for the Project, and both include widening the existing bridge, adding lanes, widening and realigning the highway ramps, and adding a Class IV cycle track bicycle facility on each side of Palm Avenue.

The National Environmental Policy Act (NEPA) compliance is required because the Federal Highway Administration (FHWA) approval is required to modify access to an Interstate. The California Department of Transportation (Caltrans) is the lead agency under NEPA on behalf of FHWA pursuant to 23 United States Code (USC) 327. Caltrans is also the CEQA lead agency and is providing oversight for this Project.

Project requirements include compliance with Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303), which declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) states that "use" of protected resources is allowed only if "there is no prudent and feasible alternative to using that land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

Use occurs when 1) a property is acquired for a transportation project, 2) there is an occupancy of land that is adverse to the preservationist purpose of Section 4(f), or 3) there is (are) proximity impact(s) that substantially impair(s) the purpose of the land. Responsibility for compliance with Section 4(f) has been assigned to Caltrans.

Palm Ridge Neighborhood Park is located at Palm Avenue and Firethorn Street. Palm Ridge Neighborhood Park warrants protection under Section 4(f) because it is a publicly accessible and publicly owned park. Potential impacts to park land from the Project and proposed measures to minimize impacts are summarized below and discussed in more detail in the enclosed draft

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to enhance California's economy and livability"*

Section 4(f) *De Minimis* Impact Finding. *De minimis* means that the impacts would not adversely affect the activities, features, and attributes that qualify the park for protection under 4(f), considering proposed avoidance, minimization, and mitigation measures.

**Section 4(f) Potential Impacts/Use**

Potential park impacts and use of park land listed below would result from road widening, installation of an eastbound Class IV cycle track, and relocation of a water pipeline (see Figures 1 and 2). The duration of construction would be approximately four months for the retaining wall and three months for relocation of the water pipeline segment under either build alternative.

<i>Alternative 1 + IV (One Quad Partial Cloverleaf with Class IV Cycle Track)</i>	<i>Alternative 2 + IV (Spread Diamond with Class IV Cycle Track)</i>
Permanent Easement <ul style="list-style-type: none"> <li>Excavation of an approximately 20-foot-wide strip of park slope totaling 0.09 acres for construction. Approximately 13 trees will be removed.</li> <li>Installation of an approximately 10-foot-high retaining wall</li> <li>Permanent Right-of-Way Easement acquisition of approximately 0.09 acre (park slope will be excavated and permanently converted to a Class IV cycle track and retaining wall)</li> </ul>	Permanent Easement <ul style="list-style-type: none"> <li>Excavation of an approximately 35-foot-wide strip of park slope totaling 0.22 acres for construction. Approximately 13 trees will be removed.</li> <li>Installation of an approximately 17-foot-high retaining wall</li> <li>Permanent Right-of-Way Easement acquisition of approximately 0.14 acre (park slope will be excavated and permanently converted to a Class IV cycle track and retaining wall)</li> </ul>

**No Section 4(f) Use – Temporary Occupancy:**

As part of the project a water pipeline will be required to be relocated. This relocation will require a temporary occupancy of a small portion of the Palm Ridge Park. Temporary occupancy criteria is allowable if the following five conditions set forth in 23 CFR 774.13(d) can be satisfied:

- Duration of occupancy must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project, and

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- There must be documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.

The relocation of the waterline meets all of the above-mentioned criteria and therefore qualifies for temporary occupancy and Section 4(f) does not apply.

#### **Avoidance, Minimization, and Mitigation Measures**

The following measures would avoid, minimize, and/or mitigate impacts to the Palm Ridge Neighborhood Park:

- Trees would be replaced at a 1:1 ratio, with 48" box sized trees. Location and type of trees to be planted within the park would be determined by the City Parks and Recreation Department during the final design.
- The Project will include repair and/or replacement of the Palm Ridge Park surface parking lot or another improvement similar in terms of scope and scale benefitting the park and recreation facilities as mitigation. This improvement will be confirmed by the City's Public Works Department and approved by the City's Parks and Recreation Department during the design phase.
- The ball field closest to Palm Avenue and adjacent sidewalk will be designated as an Environmentally Sensitive Area (ESA) and will be protected by Temporary ESA fencing during construction.
- Access to the park and parking lot from Firethorn Street will be maintained throughout construction.
- Active construction will be avoided during special events or times of high park use. The construction schedule will be drafted in coordination with the City's Parks and Recreation Department.
- Construction notifications will be posted at the park prior to the start of construction.
- Revegetation within City park land will be completed according to the City of San Diego's Landscape Standards and the Project's revegetation plan in coordination with the City's Parks and Recreation Department.

#### ***De Minimis* Impact and Temporary Occupancy Findings and Concurrence**

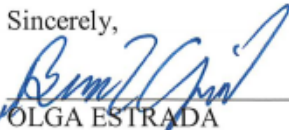
Caltrans concludes that the use of Palm Ridge Neighborhood Park would not adversely affect any of the activities, features, or attributes that qualify the park for protection under 4(f), and is *de minimis*. A Section 4(f) Evaluation will not be required.

To complete the Section 4(f) documentation process, Caltrans is requesting written concurrence from the official(s) with jurisdiction over a property that the impacts would be *de minimis*. The City of San Diego Parks and Recreation Department is the official with jurisdiction because the Parks and Recreation Director, is authorized by San Diego Municipal Code §22.1502 to be responsible for the control and management of the parks and other recreational facilities owned, controlled or operated by the City.

Herman Parker  
April 5, 2019  
Page 4

Please review the *de minimis* impact and temporary occupancy findings above, sign to document your concurrence with these findings, and forward the signed original back to Caltrans District 11, attention Olga Estrada, 4050 Taylor Street, San Diego 92110. If you have any questions regarding Section 4(f) or the *de minimis* finding, please contact Olga Estrada at 619-688-0229 or [olga.estrada@dot.ca.gov](mailto:olga.estrada@dot.ca.gov). If you have any questions regarding the Project, please contact Negin Afagh at 619-235-1999 or [NAfagh@sandiego.gov](mailto:NAfagh@sandiego.gov).

Sincerely,



OLGA ESTRADA  
Caltrans, District 11  
Senior Environmental Planner

4/16/19

DATE

The signature below represents written concurrence on the *de minimis* impact and temporary occupancy findings that the proposed Interstate 805/Palm Avenue Interchange Improvement Project would not adversely affect the activities, features, and attributes that qualify the property, Palm Ridge Neighborhood Park, for protection under Section 4(f) within the City of San Diego.



HERMAN PARKER  
City of San Diego,  
Parks and Recreation Department  
Director

4/8/19

DATE

cc: Roger Carlin, Negin Afagh, Dan Nutter

Enclosures: Draft 4(f) *De Minimis* Impact Finding

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**Table 4 City Meeting with Park and Rec Department (Impacts of S00869 Project to Palm Ridge Park)**

<b>Date</b>	<b>Attendees</b>	<b>Meeting Agenda</b>
2/9/2016	Jesus Garcia Dan Nutter Olga Estrada San Li Andy Sanford	Otay Mesa-Nestor Community Planning Group Presentation.
11/2/2016	Jim Winter Jesus Garcia Dan Nutter	Palm Avenue/ I-805 Project and Palm Ridge Park Coordination Efforts
5/2/2017	Dan Nutter Jesus Garcia Jim Winter David Powell David Monroe Manuel Gonzales Andrew Field	Meeting per Jim's request Discuss scope of project and potential integration of the project with Palm Ridge Park for use in Right-of-Way project.
8/10/2017	Jim Winter Jesus Garcia Johanna Rivera Dan Nutter (Phone Bridge) Manuel Gonzales (Phone Bridge)	1. Go over the comments of Park and Rec from the 4(f) de minimis letter 2. Park and Rec major concern was the permanent easement requirement because of the type of wall (soil nail) that the city will be using 3. The City agreed to use the standard Caltrans type 1 wall that doesn't require permanent easement and trees could be replanted 4. The City will modify the 4(f) letter prior to Park and Rec approval/signature The 4(f) modifications include: add a language in the letter that require mitigation and no use of soil nails.
11/9/2017	Jesus Garcia Dan Nutter Megan Hickey Jim Winter	Meeting with Park and Rec regarding Caltrans comments on the 4(f) letter.
1/11/2018	Jesus Garcia Dan Nutter	Otay Mesa Rec Council Meeting.

**Email Coordination with Park and Rec**

11/06/2016-03/22/2017	Ryan Gerrity	Coordination to appropriate advising attorney for potential taking of dedicated parkland for use in public ROW project.
	Hilda Mendoza	Hilda requested Park and Rec to submit an LSR (Legal Service Request).
	Jim Winter	Jim Winter created LSR (03/22/2017) and will submit to Park and Rec DCA after corrections from Jesus.
04/18/2017	David Powell	Possible for council to authorize the use of park without a vote of the people. He suggested a meeting to discuss further.
5/2/2017		<b>Public Works Meeting with Park and Rec.</b>
June 2017		Directed Concurrence Letter to Jim Winter for signature.
6/28/2017	Jim Winter	He doesn't have the authority to sign the letter. Deputy Director (David Monroe) will be signing the letter after legal review from DCA (David Powell).
7/25/2017	Jim Winter	Park and Rec provided their comments on the concurrence letter. They wanted a meeting to address concern and issue.
8/10/2017		<b>Meeting with Park and Rec.</b>
8/23/2017		Park and Rec and PW agreed to use a different type of wall and will eliminate soil nails in the design. PW will revise document.
9/5/2017		Sent the revised 4(f) de minimis letter to Jim for Park and Rec review.
9/12/2017	Jim Winter	Concern with the language of "permanent right of way take off..." and mitigation statements.
10/23/2017		Forwarded City Environmental Comments to Park and Rec.
11/3/2017		Caltrans forwarded letter to City with their comments.
11/9/2017		<b>Meeting with Park and Rec regarding Caltrans Comments to 4(f) letter.</b>

# APPENDIX B.

TITLE VI NON-DISCRIMINATION POLICY STATEMENT

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**DEPARTMENT OF TRANSPORTATION**

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a California Way of Life.*

April 2018

**NON-DISCRIMINATION  
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:  
[http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_violated.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm).

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email [Title.VI@dot.ca.gov](mailto:Title.VI@dot.ca.gov), or visit the website [www.dot.ca.gov](http://www.dot.ca.gov).

A handwritten signature in blue ink, appearing to read "Laurie Berman".

LAURIE BERMAN  
Director

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# APPENDIX C.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION SUMMARY

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## **APPENDIX C. AVOIDANCE, MINIMIZATION, AND/OR MITIGATION SUMMARY**

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization features, and /or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following ECR is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Note: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.

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## Interstate 805/Palm Avenue Interchange Improvements Environmental Commitments Record

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Land Use/ Section 4(f)</b>					
PR-1	In conformance with the Park Preservation Act, the acquiring entity of the City of San Diego (Public Works Department) shall make funds or land, or both, available to the operating entity (Department of Park and Recreation) to compensate for the real property of the public park acquired for the project. As specified in Public Resources Code (PRC) Section 5405, the amount of compensation for taking of park land shall be equal to one of the following: The cost of acquiring substitute park land of comparable characteristics and of substantially equal size where it would be usable by generally the same persons who used the existing park land and facilities; Substitute park land plus the cost of development of such; Any combination of substitute park land and compensation. As specified in PRC Section 5404, the operating entity may choose to improve the un-acquired portion of the park land and facilities using the funds received from the acquiring entity (if less than 10 percent and no more than one acre of park land is acquired), after holding a public hearing and upon a majority vote of its legislative body.	City of San Diego & Caltrans	Pre-Construction		
4(f)-1	Trees would be replaced at a 1:1 ratio, with 48" box sized trees. Location and type of trees to be planted within the park would be determined by the City of San Diego Park and Recreation Department during the final design.	City of San Diego Park and Recreation Department	Post-Construction		
4(f)-2	The project will include repair and/or replacement of the Palm Ridge Park surface parking lot or another improvement similar in terms of scope and scale benefitting the park and recreation facilities as mitigation. This improvement will be confirmed by the City of San Diego's Public Works Department and approved by the City of San Diego's Park and Recreation Department during the design phase.	City of San Diego Public Works Department and Park and Recreation Department	Post-Construction		
4(f)-3	The ball field closest to Palm Ave and adjacent sidewalk will be designated as an Environmentally Sensitive Area (ESA) and will be protected by Temporary ESA fencing during construction.	City of San Diego Park and Recreation Department	During Construction		
4(f)-4	Access to the park and parking lot from Firethorn Street will be maintained throughout construction.	City of San Diego Park and Recreation Department	During Construction		
4(f)-5	Active construction will be avoided during special events or times of high park use. The construction schedule will be drafted in coordination with the City of San Diego's Park and Recreation Department.	City of San Diego Park and Recreation Department Park Officials	Pre-Construction		
4(f)-6	Construction notifications will be posted at the park prior to the start of construction.	City of San Diego Park and Recreation Department Park Officials	Pre-Construction		
4(f)-7	Revegetation within City of San Diego park land will be completed according to the City of San Diego's Landscape Standards and the project's revegetation plan in coordination with the City of San Diego's Park and Recreation Department.	City of San Diego Park and Recreation Department	Post-Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Utilities/Emergency Services</b>					
U & ES-1	Various utilities would need to be relocated but service disruption would be minimized by coordination with utility owners. Impacts to emergency services during construction would be minimized by implementation of a Transportation Management Plan.	City of San Diego & Caltrans	Pre-Construction and during construction		
U & ES-2	Any required relocations or protection measures will be coordinated with the utility owners during the design process, including the City of San Diego, SDG&E, AT&T, Cox Communications, and California American Water. Most utility companies affected by the project will design and construct their own relocation of utilities. In addition, coordination with the Public Utilities Commission (PUC) will occur on all transmission lines exceeding 50 KV, per PUC General Order 131-D. This includes the 69 KV steel power pole located behind the sidewalk along eastbound Palm Avenue by the Vons building.	City of San Diego	Pre-Construction and during construction		
U & ES-3	Impacts to emergency services during the construction will be minimized by the implementation of a Transportation Management Plan (TMP). The TMP may include the following strategies: A public awareness campaign prior to and during construction; motorist information strategies, including changeable message signs, and ground mounted signs; Incident Management elements including Construction Zone Enhanced Enforcement Program (COZEEP) to provide police assistance and surveillance.	City of San Diego & Caltrans	Pre-Construction and during construction		
<b>Traffic and Transportation/ Pedestrian and Bicycle Facilities</b>					
TR-1	A Preliminary Transportation Management Plan (TMP) has been prepared for the proposed Project (2017). The objectives of the TMP include reducing traffic delay due to construction activities, maintaining traffic flow throughout the corridor and the surrounding areas, maintaining bicycle and pedestrian access across I-805 and on Palm Avenue, and providing a safe environment for the work force and motoring public. The TMP is subject to change as required by changing circumstances.	City of San Diego & Caltrans	During Construction		
TR-2	A Public Awareness Campaign (PAC) would educate motorists, merchants, residents, elected officials and governmental agencies about construction impacts, which would enhance public acceptance and reduce traffic demand in the construction zone by encouraging alternate routes, carpooling, or traveling outside of closure hours. Preliminary target audiences identified for this project include the following: resident motorists; Montgomery High School, Montgomery Adult School, Independent Studies High School, Montgomery Middle School, Ocean View School, Finney Elementary School, Juarez Lincoln Elementary School, Silver Wing Elementary School, Howard Pence Elementary, and the Otay Mesa Branch Library; Palm Promenade (including Wal-Mart, Vons, AMC Theaters, Home Depot, and Wells Fargo Bank), Palm Ridge Shopping Center (including McDonald's and KFC), and the Montgomery Plaza Shopping Center; Kaiser Permanente Medical Care, SANDAG, Otay Mesa-Nestor Community Planning Group, and the Otay Mesa Planning Group, City of San Diego Department of Park & Recreation; U.S. Postal Service; Trinity Fellowship Christian Church, Berean Bible Baptist Academy; Metropolitan Transit System; Trucking Industry.	City of San Diego & Caltrans	Pre-Construction and during construction		
TR-3	Motorist information strategies include portable changeable message signs (PCMS), ground mounted signs, Caltrans highway information network (CHIN), and SANDAG's 5-1-1 traffic service. PCMS would alert motorists on Palm Avenue and I-805 of construction activities prior to reaching the work zone, thereby encouraging them to take an alternate route. Ground mounted signs would be placed at various street locations along Palm Avenue and at potential detour locations in advance of the detour event so motorists can plan to avoid the construction area and/or detour.	City of San Diego & Caltrans	During Construction		
TR-4	The CHIN is a 24-hour information hotline and website with updated information regarding the condition of the California State Highway System, including information about full closures, one-way traffic controls, lane closures, construction maintenance projects, and emergencies. SANDAG's 5-1-1 Traffic service provides free on-demand, up-to-the-minute traffic conditions and driving times for personalized routes. These services help motorists make informed decisions about avoiding potentially congested areas to reduce driving frustration and travel delays.	City of San Diego & Caltrans	During Construction		



No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
TR-5	The primary incident management program proposed in the Preliminary TMP is the Construction Zone Enhanced Enforcement Program (COZEEP), which involves using the California Highway Patrol to assist during the following Project construction activities: placement and removal of temporary railing, and re-striping; night time operations and where workers are on foot in the work zone; replacement of cantilevered or bridge-mounted overhead sign panels in various locations; construction of auxiliary lanes, bridges, interchanges, and gore areas at ramps; full freeway closures.	City of San Diego	During Construction		
TR-6	The presence of law enforcement officials typically slows traffic through the work zone and provides for a timely response to issues such as disabled vehicles or impending congestion.	City of San Diego	During Construction		
TR-7	Other incident management programs proposed in the Preliminary TMP include establishing a Traffic Management Team to assess problem areas and assist in implementing solutions.	City of San Diego & Caltrans	During Construction		
TR-8	Construction strategies include phasing the project into an initial interim phase and ultimate project features phase. This would spread construction over a longer period but reduce the intensity of construction activity in the project area. Additional construction strategies include lane closures, total facility closure, off-peak/night/weekend work, and consideration for potential conflicts with other projects and special events.	City of San Diego & Caltrans	During Construction		
TR-9	Alternative route strategies would draw some traffic volume away from the project area. Temporary detours would be implemented during construction of this project, including having traffic exit the freeway at the Palm Avenue off-ramps and travel on the roadway to the corresponding on-ramp to continue their travels, in order to avoid driving underneath the bridge. Commuter traffic would be encouraged to avoid the work area and utilize I-5 as an alternate route. Depending on the origin of the commute, travelers could utilize portions of Palm Avenue (west of the interchange with I-805), Ocean View Hills Parkway, Del Sol Boulevard, Picador Boulevard, and route 905 to reach I-5 and complete their commute.	City of San Diego & Caltrans	During Construction		
TR-10	Telecommuting and variable work hours like the 9/80 work schedule would reduce traffic through the construction zone at peak times and could be implemented for the population living adjacent to the project but employed, for example, in downtown San Diego or the Sorrento Valley/UTC/Golden Triangle area. Coordination with employment centers regarding variable work hours and telecommuting could take place as part of the Public Awareness Campaign.	City of San Diego & Caltrans	During Construction		
<b>Cultural Resources</b>					
CR-1	If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery will be diverted until a qualified archaeologist can assess the nature and significance of the find.	Qualified Archaeologist	During Construction		
CR-2	If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98 will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans Professionally Qualified Staff (PQS), so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of the PRC 5097.98 are to be followed as applicable.	Caltrans Professionally Qualified Staff	During Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Visual/Aesthetics</b>					
VIS-1	New bridge features, such as support columns, infill walls and bridge railing shall be similar to or compatible with the visual character of the existing bridge. The existing decorative tubular arches that frame the chain link fences on top of the barrier rails shall be salvaged and reinstalled on new barrier rails with new gray vinyl, chain link fencing. Cast-in-place concrete columns shall match existing color, finish, and column geometry. The infill wall and bridge barrier shall have an architectural texture. Slope paving on the bridge shall have deeply textured facing materials such as tan, 5-groove, or split face pavers to deter graffiti. All galvanized surfaces shall be stained a dark brown color with "Natina Steel."	City of San Diego & Caltrans	During Construction		
VIS-2	Landscape Areas beyond the gore shall be paved with a contrasting surface. The minimum width of landscape area next to this paving shall be 30 feet. Paving shall be integrally colored tan concrete with an exposed aggregate finish. Concrete color must be Davis "Mesa Buff", Scofield "Schooner Beige" or Solomon "Ginger". Unprotected, narrow landscape areas in the freeway setting shall be paved with integrally colored tan concrete with an exposed aggregate finish.	City of San Diego & Caltrans	During Construction		
VIS-3	Walls facing the freeway and Palm Avenue shall be setback from travelers as much as possible to allow room for planting buffers and to minimize the visual prominence of each wall. Walls shall possess a natural, organic character by following the contours of natural topography. The layout and top of wall profile shall consist of long radius curves, and the use of tangent sections (straight lines) shall be avoided if possible. Since the wall layout shall ideally follow a single topographic contour, the top of the wall shall remain at that elevation and be essentially level. Wall height variations shall become apparent at the bottom of the wall. When wall layouts must vary from adjacent contours, top of wall profiles should be kept at less than 10 percent if possible. Retaining walls shall have a formliner texture compatible with walls in the I-805 Corridor. Architectural design elements such as pilasters and wall caps shall be used to reduce visual impacts associated with walls. Retaining walls at Palm Avenue shall be integrally colored Davis Color "Mesa Buff" to be consistent with community street walls at the Palomar overcrossings in the I-805 corridor.	City of San Diego & Caltrans	During Construction		
VIS-4	Cut and Fill slopes shall be graded 1:2 (v:h) or flatter. Steeper cut slopes may be possible if they are stepped. Grading shall use slope rounding to approximate the appearance of natural topography.	Caltrans and City of San Diego Project Engineers	During Construction		
VIS-5	Contractor use areas shall be cultivated to a depth of 12 inches to loosen compacted soils prior to planting. Exposed surfaces of drainage devices (ditches, aprons, headwalls), vegetation control, rock slope protection and slope protection shall be colored tan. All temporary erosion control materials such as fiber rolls, netting, rope, must be biodegradable. Both Build Alternatives will require re-landscaping of areas affected by the bridge widening and ramp improvements. The affected area is expected to include the entire interchange from 0.3 mile south to 0.3 mile north of the Palm Avenue overcrossing and from I-805 to the State right-of-way. Either of the Build Alternatives may involve phasing of construction. Landscape replacement and irrigation repair will occur with all phases.	Caltrans and City of San Diego Project Engineers	During Construction		
VIS-6	All planting and street trees shall be replaced per the City of San Diego Municipal Code. New street trees are required mitigation in front of the wall that replaces the crib wall. Root barrier shall be installed adjacent to sidewalks as required. Non-invasive plants that are appropriate for the Southern California climate and or native or drought tolerant shall be used. All existing trees to remain shall be protected in place with temporary construction fencing around the root zone. All trimming of the roots or the canopy shall be monitored and based upon a report from a certified arborist.	Caltrans and City of San Diego Project Engineers	During Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
VIS-7	All irrigation systems within the City of San Diego right-of-way and including the park will need to be retrofitted to accommodate the features of the project. All plantings shall be installed and approved prior to the start of the plant establishment period (PEP). All permanently irrigated plants and sod installations at the park shall include a 90-day PEP and seed or stolonized turf areas will include a 120-day PEP. All unhealthy plant material shall be replaced, and the PEP extended if plantings are not properly maintained. All other plantings in City of San Diego right-of-way (in front of the crib wall) will include a one-year plant establishment with the roadway construction contract. The affected property owner(s) will maintain the plantings and irrigation once the one-year plant establishment period has expired. Once the acceptance of the PEP is completed for temporarily irrigated native plantings, a 25-month revegetation maintenance and monitoring period shall begin.	City of San Diego	During and Post Construction		
VIS-8	The project shall revegetate all disturbed landscaped and naturalized vegetation areas with irrigated container plants followed by hydroseeding or groundcover plantings. Southern California native, or drought tolerant, non-invasive plants shall be used. Trees will be provided in equal (or greater) quantity to the number of trees removed to construct the project. Walls shall be planted with Boston Ivy to discourage graffiti where reasonable and feasible with consideration of maintenance access and safety. After irrigation systems are installed, weeds shall be germinated and killed prior to planting.	City of San Diego & Caltrans	During Construction		
VIS-9	Planting and vegetated areas outside the construction footprint shall be designated Landscape Protection Areas (LPA) and protected by temporary fencing prior to clearing and grubbing. No equipment, material storage, vehicles or access paths are allowed within LPAs. Limited access to LPAs is allowed for irrigation check and test, irrigation removal, and irrigation work. All existing trees to remain shall be protected in place with temporary fencing around the root zone at the canopy limits. A certified arborist shall evaluate existing trees within the project limits to determine if they should be pruned or removed for safety. All root or canopy trimming shall be monitored by a certified arborist. All dead trees and palms shall be removed by the project.	City of San Diego & Caltrans	During Construction		
VIS-10	Irrigation must be installed at all new planting areas to establish the proposed planting. The existing planting is currently being watered with potable water supply. There are two existing 2" water meters at Palm Ave west of the "P-4" Line SB offramp (4398 Palm Ave, Acct # 19-03636-21-3). The meters will need to be relocated to accommodate the Palm Ave widening. Recycled water is anticipated for the future. All existing irrigation controllers and systems will be impacted by bridge widening. All existing irrigation systems will be upgraded to a Remote Irrigation Control System (RICS) utilizing the latest Calsense equipment (Controllers and other components) to reduce flows and increase delivery efficiency. The project will replace deteriorated existing water supply lines, valves, and systems.	City of San Diego & Caltrans	During Construction		
VIS-11	Avoid impacts to existing irrigation systems where possible. Check and test existing irrigation systems prior to construction activities. Provide necessary measures to maintain a constant water supply to existing systems to remain outside of work and contractor use areas prior to clearing and grubbing. Repair or replace impacted irrigation components. This includes valve manifolds, control wire, mainline pipe, lateral sprinkler pipe and sprinkler heads. Repair or replace irrigation mainlines and control wire that service areas outside the construction footprint.	City of San Diego	During Construction		
VIS-12	Contract Layout Plans shall identify City and freeway crossover locations within the vicinity of work areas and contractor use areas. Irrigation crossovers shall be extended or replaced where construction work impacts them.	City of San Diego & Caltrans	Pre-Construction		
VIS-13	Prior to construction, the project shall perform necessary measures to maintain water supply to existing City and freeway systems beyond the construction footprint such as temporary highlining, new water meters, extending existing crossovers and new crossovers.	City of San Diego & Caltrans	Pre-Construction		
VIS-14	The project shall provide a 4-inch concrete-lined Ductile Iron Pipe (DIP) supply line in the southern widening for irrigation water. The 4" supply line will allow for the irrigation system to be converted to recycled water when recycled water becomes available.	City of San Diego & Caltrans	During Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
VIS-15	Type 2 Plant Establishment shall be included with each Roadway Construction project for a period of one year (250 working days), followed by extended plant establishment under a separate contract.	City of San Diego & Caltrans	Pre- and Post-Construction		
VIS-16	The permittee shall provide additional plant establishment by a separate contract for a period of four years (1000 working days) at the end of each Roadway Construction project. Plant Establishment shall include weeding, watering and replacement plantings as required.	City of San Diego	Post-Construction		
<b>Water Quality and Storm Water Runoff</b>					
WQ-1	The project is being designed to comply with the current Best Management Practices to avoid water quality impacts.	City of San Diego & Caltrans	Pre-Construction		
WQ-2	Visual monitoring is required for storm water discharge during construction. Sampling and analysis for non-visible pollutants is required if pollutants may be present based on previous site contamination or if any spill, (even if due to breakage, malfunction or leakage of equipment) was observed during a visual inspection of the construction site that could result in the discharge of pollutants to surface waters.	City of San Diego & Caltrans	During Construction		
WQ-3	Fiber Rolls are proposed on the faces of slopes to slow down runoff and remove sediments. Gravel Bags will be used as additional protection to intercept sediments. Standard Caltrans Inlet Protection is proposed at drainage inlets.	City of San Diego & Caltrans	During Construction		
WQ-4	Construction Entrance will be used to reduce tracking of dirt onto the roadways. Concrete Washout will also be used to prevent cement from flowing to drainage systems. Locations of these Temporary BMPs are subject to the contractor's phasing of the work and timing of operations. The Contractor is ultimately responsible for developing a SWPPP that complies with the Caltrans NPDES Permit.	City of San Diego & Caltrans	During Construction		
WQ-5	Drain Inlet Stenciling will be required on City streets. Locations will be verified with Caltrans functional units during final design when all drainage units for the project are identified.	City of San Diego & Caltrans	Pre-Construction		
<b>Geology/Soils/Seismic/Topography</b>					
GEO-1	Proposed improvements in contact with the ground shall be designed and constructed in accordance with the Caltrans Standard Specifications and good construction practices.	City of San Diego & Caltrans	During Construction		
GEO-2	For corrosion-sensitive improvements in direct contact with potentially corrosive soils, further evaluations by a corrosion engineer would be performed to incorporate the necessary precautions to avoid premature corrosion.	City of San Diego & Caltrans	Pre-Construction		
GEO-3	At a minimum, all retaining walls shall be provided with a drainage system consisting of weep holes or back drains adequate to prevent the buildup of hydrostatic forces. Specific drainage details shall be developed during final design of the selected alternative.	City of San Diego & Caltrans	During Construction		
GEO-4	All grading shall be performed in conformance with Caltrans Standard Specifications. Backfill placed behind abutment walls, retaining walls, and wing walls should have a very low to low expansion potential. Ponding or jetting of backfill would not be permitted.	City of San Diego & Caltrans	During Construction		
GEO-5	Near-surface, loose soils that shall not be adequate for the support of new fill loads at abutment locations would be partially removed and recompacted prior to the placement of structural backfill and foundation construction.	City of San Diego & Caltrans	During Construction		
GEO-6	Additional field work and laboratory testing shall be conducted during final design of the selected alternative, including borings along the proposed retaining wall alignments, roadway realignments, and new bridge alignments where no borings were previously drilled. Final recommendations and Special Provisions would be based on the findings of subsurface exploration, testing, and analysis as presented in final Geotechnical Design Reports and Foundation Reports.	City of San Diego & Caltrans	Pre-Construction		
GEO-7	Structures would be designed in accordance with final recommended seismic parameters, including the appropriate peak ground acceleration (recommended as 0.28g for preliminary design purposes).	City of San Diego & Caltrans	Pre-Construction		
GEO-8	Best Management Practices proposed in Section 2.10, Water Quality and Storm Water Runoff, would stabilize and reduce potential erosion during construction.	City of San Diego & Caltrans	During Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Paleontology</b>					
PAL-1	Prior to the commencement of construction, a Qualified Project Paleontologist shall be retained to oversee the mitigation Program, and a regional fossil repository shall be designated to receive any discovered fossils. Lists of all qualified paleontologists overseen by the project Paleontologist, and maps of areas to be monitored for paleontological resources shall be submitted to the agency administering the construction contract for approval.	Project Paleontologist	Pre-Construction		
PAL-2	The qualified paleontologist will attend the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues.	Project Paleontologist	Pre-Construction		
PAL-3	The qualified paleontologist shall conduct a paleontological resource training workshop to be attended by all earth excavation personnel.	Project Paleontologist	Pre-Construction		
PAL-4	If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. The paleontologist (or paleontological monitor) has the authority to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner.	Project Paleontologist	During Construction		
PAL-5	Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, and cataloged as part of the mitigation program.	Project Paleontologist	During and Post-Construction		
PAL-6	Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited (as a donation) in the designated fossil repository. Donation of the fossils shall be accompanied by financial support for initial specimen storage.	Project Paleontologist	Post-Construction		
PAL-7	A final summary report will be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	Project Paleontologist	Post-Construction		
<b>Hazardous Waste/ Materials</b>					
HW-1	Observations would be made during excavations in the portion of the project area adjacent to the South Bay Burn Site. If remnants of this site are encountered, a qualified environmental professional would be consulted.	City of San Diego & Caltrans	During Construction		
HW-2	If subsurface features including undocumented underground storage tanks, septic systems, wells, pipes, and dry wells, etc., are encountered, they would be properly handled, abandoned or disposed of in accordance with county permit requirements.	City of San Diego & Caltrans	During Construction		
HW-3	Bridge as-built drawings would be reviewed for use of asbestos-containing materials and lead paint as construction materials prior to renovation or demolition of bridge structures.	City of San Diego & Caltrans	Pre-Construction		
HW-4	Excess soil generated from the project for offsite disposal would be subject to sampling and analytical testing for potential contaminants of concern (e.g., heavy metals, petroleum hydrocarbons) for designated disposal facility acceptance.	City of San Diego & Caltrans	During Construction		
HW-5	Management of excess soil would be performed in accordance with regulatory protocols. If suspected contamination is encountered during construction, the area would be isolated, and sampling performed to determine the nature of the suspected impacts, construction worker health and safety protocols, and disposal alternatives.	City of San Diego & Caltrans	During Construction		
HW-6	A survey would be conducted of the Palm Avenue bridge overcrossing to include asbestos-containing building materials and lead-containing paint prior to the start of any construction or demolition activities.	City of San Diego & Caltrans	Pre-Construction		
HW-7	The contractor(s) would prepare a project-specific health and safety plan to prevent or minimize worker exposure to lead in soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols for the handling of soil.	City of San Diego & Caltrans	Pre-Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Air Quality</b>					
AQ-1	No exceedances of air quality standards would occur from Project construction or operation. Specific measures to control dust and particulates would be incorporated into the project.	City of San Diego & Caltrans	During Construction		
AQ-2	SDAPCD Rule 51, Nuisance, prohibits emissions that cause injury, detriment, nuisance, or annoyance to the public. Therefore, emissions will be monitored and limited during construction.	City of San Diego & Caltrans	During Construction		
AQ-3	SDAPCD Rule 55, Fugitive Dust Control, restricts the emissions of fugitive dust during demolition and construction activities. Therefore, the project will incorporate the use of water trucks to limit emissions of fugitive dust during demolition and construction activities.	City of San Diego & Caltrans	During Construction		
AQ-4	Since no adverse air quality impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-9.01, construction air emissions would be short-term, i.e., less than five years. Further, implementing the following measures would minimize the temporary air quality impacts from construction: Minimize land disturbance; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes; cover all trucks hauling dirt when traveling at speeds greater than 15 miles per hour; stabilize the surface of dirt piles if not removed within two days; limit vehicular paths on unpaved surfaces and stabilize any temporary roads; minimize unnecessary vehicular and machinery activities; sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway; revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities; remove unused material.	City of San Diego & Caltrans	During Construction		
AQ-5	The following measure would be incorporated into the proposed Project to minimize exposure to diesel particulate emissions: locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density.	City of San Diego & Caltrans	During Construction		
<b>Noise</b>					
N-1	Under NEPA/23 CFR 772, because the noise levels at sensitive receptors approach or exceed the noise abatement criteria of 67 dBA, noise abatement is required to be considered. Two noise barriers (NB-1 Alternative A and NB-1 Alternative B) were considered and found to be acoustically feasible but not cost reasonable for both options. Therefore, neither noise barrier is recommended for construction at this time.	City of San Diego	During Environmental and Design Phases		
N-2	San Diego County General Plan LU-2.8: Mitigation of Development Impacts will be implemented. This requires measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.	City of San Diego & Caltrans	During Construction		
N-3	Standard Special Provisions 14-8.02A: The contractor will comply with all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract.	City of San Diego & Caltrans	Include in Specs & During Construction		
N-4	Standard Special Provisions 14-8.02A: Do not exceed 86dBA Lmax at 50 feet from the job site from 9:00 pm to 6:00 am.	City of San Diego & Caltrans	Include in Specs & During Construction		
N-5	Noisier operations will be planned during times least sensitive to receptors.	City of San Diego & Caltrans	During Construction		



No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Natural Communities</b>					
NC-1	Standard project avoidance and minimization procedures for either Build Alternative include delineation of the project footprint prior to construction in order to avoid encroachment into the surrounding sensitive area.	City of San Diego & Caltrans	During Construction		
NC-2	Standard project avoidance and minimization procedures for either Build Alternative include monitoring by a qualified biologist during construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat outside of the project footprint.	City of San Diego & Caltrans	During Construction		
NC-3	If the 0.3-acre of disturbed Diegan coastal sage scrub is directly and temporarily impacted, mitigation would be accomplished through revegetation of the 0.3-acre temporarily disturbed during construction. The 0.3-acre footprint would be hydroseeded with a Diegan coastal sage scrub seed mix that includes, but is not limited to, coastal sagebrush ( <i>Artemisia californica</i> ), coyote brush ( <i>Baccharis pilularis</i> ), San Diego sunflower ( <i>Bahioopsis laciniate</i> ) and California buckwheat ( <i>Eriogonum fasciculatum</i> ). Maintenance would occur in the short term (e.g. 24 months) weed control during establishment.	City of San Diego & Caltrans	During Construction		
<b>Animal Species</b>					
AS-1	Direct impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA) and similar provisions of the California Department of Fish and Wildlife (CDFW) Code from construction of either of the build alternatives for the proposed project would be avoided by implementing the following measure as part of the project: removal of vegetation will occur outside of the breeding season for birds. However, if a preconstruction nesting bird survey determines that nesting birds do not occur in the vicinity of the site (typically 300 feet for passerine birds and 500 ft for raptors), removal of vegetation can occur within the breeding season for avian species.	Caltrans and City of San Diego Project Engineers	Pre-Construction		
AS-2	If vegetation removal is to occur from <u>January 15 to August 31</u> , a preconstruction nesting bird survey for raptors and other nesting species will be conducted. If a nest is found, methods will be implemented to avoid impacts. This will consist of a no-work buffer zone placed around the nest until the adults are no longer using it or the young have fledged. The specific buffer width will be determined by a qualified biologist at the time of discovery. These will vary based on site conditions and type of work to be conducted.	Caltrans and City of San Diego Project Engineers	Pre-Construction		
<b>Invasive Species</b>					
IS-1	Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds.	Caltrans and City of San Diego Project Engineers	During Construction		
IS-2	Construction equipment will be inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site, during the course of construction.	Caltrans and City of San Diego Project Engineers	During Construction		
IS-3	Trucks with loads carrying vegetation will be covered.	Caltrans and City of San Diego Project Engineers	During Construction		
IS-4	Vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations.	Caltrans and City of San Diego Project Engineers	During Construction		
IS-5	Invasive species will be monitored during the construction period and removed or treated in an environmentally sound manner.	Caltrans and City of San Diego Project Engineers	During Construction		
IS-6	In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur, as described in measures described in IS-1, IS-2, IS-3, and IS-4.	Caltrans and City of San Diego Project Engineers	During Construction		

No.	Avoidance, Minimization, and Mitigation Measures	Responsible Party	Timing/Phase	Action Taken to Comply with Avoidance, Minimization, and Mitigation Measures	Date
<b>Climate Change</b>					
CC-1	Landscaping reduces surface warming and, through photosynthesis, decreases CO2. The project proposes planting in the intersection slopes and seeding in areas next to ramps as well as planting a variety of different-sized plant material. These trees will help offset any potential CO2 emissions increase.	Caltrans and City of San Diego Project Engineers	Post-Construction		

# APPENDIX D.

## LIST OF ACRONYMS

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## APPENDIX D. LIST OF ACRONYMS

ac	Acre
ACOE	Army Corps of Engineers
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ADL	Aerially-Deposited Lead
AMMMs	Avoidance, Minimization, and/or Mitigation Measures
APCD	Air Pollution Control District
APE	Area of Potential Effect
AQAP	Air Quality Attainment Plan
AQTR	Air Quality Technical Report
ARB	Air Resources Board
ASR	Archaeological Survey Report
BAU	Business-as-usual
BMPs	Best Management Practices
BOD	Biochemical Oxygen Demand
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDC	Center for Disease Control

CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CH <sub>4</sub>	Methane
CHIN	Caltrans Highway Information Network
CHRIS	California Historical Research Information System
CIA	Community Impact Assessment
CNPS	California Native Plant Society
CO	Carbon Monoxide
COS	Conservation of Space
COZEEP	Construction Zone Enhanced Enforcement Program
CSO	Cultural Studies Office
CTP	California Transportation Plan
CWA	Clean Water Act
dB	Decibel
DDI	Diverging Diamond Interchange



DIP	Ductile Iron Pipe
DEH	Department of Environmental Health
DPM	Diesel Particulate Matter
DSA	Disturbed Soil Area
DWQ	Department of Water Quality
EA	Environmental Assessment
EB	Eastbound
ECR	Environmental Commitments Record
EMS	Emergency Medical Services
EO	Executive Order
ESA	Environmentally Sensitive Area
FBA	Facilities Benefit Assessment
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FTIPs	Federal Transportation Improvement Programs

GHG	Greenhouse Gas
HEI	Health Effects Institute
HOV	High Occupancy Vehicle
HOT	High Occupancy Toll
H <sub>2</sub> S	Hydrogen Sulfide
H&SC	Health and Safety Code
HPSR	Historic Property Survey Report
ILV	Intersecting Lane Vehicles
IPCC	International Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
kV	kilovolts
LEDPA	Least Environmentally Damaging Practical Alternative
LOS	Level of Service
LPA	Landscape Protection Area
LT	Long-term
LU	Land Use
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Planning Area
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization

MS4s	Municipal Separate Storm Sewer Systems
MSAT	Mobile Source Air Toxics
MSCP	Multiple Species Conservation Program
MSL	Mean Sea Level
MTS	Metropolitan Transit System
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NB	Northbound
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
N <sub>2</sub> O	Nitrous Oxide
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOAA Marine Fisheries Service	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System

NRCS	Natural Resources Conservation Service
NSR	Noise Study Report
O <sub>3</sub>	Ozone
OPR	Office of Planning and Research
OSHA	Occupational Safety Health Act
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement
PAC	Public Awareness Campaign
Pb	Lead
PCBs	Polychlorinated Biphenyls
PCMS	Portable Changeable Message Signs
PDT	Project Development Team
PEP	Plant Establishment Period
PER	Paleontological Evaluation Report
PIR	Paleontological Investigation Report
PM	Particulate Matter
PM <sub>x</sub>	Particles of x micrometers or smaller
PMP	Paleontological Mitigation Plan
POAQC	Projects of Air Quality Concern
ppm	parts per million
PR	Project Report
PRC	Public Resources Code
PS&E	Plan Specification and Engineering

PSR	Project Study Report
PUC	Public Utilities Commission
Qoa	Old alluvial floodplain deposits
Qya	Young alluvial floodplain deposits
RAP	Relocation Assistance Program
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RICS	Remote Irrigation Control System
ROG	Reactive Organic Gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Boards
SANDAG	San Diego Association of Governments
SAP	Subarea Plan
SB	Southbound
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDC	Seismic Design Criteria
SDG&E	San Diego Gas & Electric
SF <sub>6</sub>	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer

SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations and Cleanup
SO <sub>x</sub>	Sulfur Oxides
SOV	Single Occupancy Vehicles
SR	State Route
SSC	Species of Special Concern
ST	Short-term
SWDR	Stormwater Data Report
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T & E	Threatened or Endangered
TAC	Toxic Air Contaminant
TCE	Temporary Construction Easement
TDC	Targeted Design Constituents
TDM	Transportation Demand Management
TDS	Total Dissolved Solids
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
TSCA	Toxic Substances Control Act
TSM	Transportation System Management
TSS	Total Suspended Solids
USACE	U.S. Army Corps of Engineers



USC	United States Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
V/C	Volume to Capacity Ratio
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WB	Westbound
WDR	Waste Discharge Requirement
WPCP	Water Pollution Control Plan

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# APPENDIX E.

EXCERPTS FROM THE RTP AND RTIP

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# Pages from 2050 RTP

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Table B.15 (continued)

**Revenue Constrained Scenario: Arterial Projects**

Conformity				
Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
2025	SD190	San Diego	Palm Ave/I-805 Interchange	Improvements to the Palm Avenue Bridge over I-805; including repairs to the bridge approaches; a new Project Study Report (PSR) and Preliminary Environmental Assessment Report (PEAR). Phase II of the project will include widening of the bridge, realignment of existing ramps, possible addition of northbound looping entrance ramp, restriping of traffic lanes, and signal modifications.
2025	SM19	San Marcos	Grand Ave Bridge and Street Improvements	From Discovery Street to San Marcos Boulevard, construct 4-lane arterial bridge and a 6-lane arterial street from Craven to Grand Avenue
2025	SM22	San Marcos	South Santa Fe - Bosstick to Smilax	From Bosstick to Smilax, realign and signalize the South Santa Fe/Smilax intersection (Phase I)
2025	SM24	San Marcos	Woodland Pkwy Interchange Improvements	From La Moree Road to Rancheros Drive, modify existing ramps at Woodland Parkway and Barham Drive; widen and realign SR 78 undercrossing and associated work
2025	SM31	San Marcos	Discovery St Improvements	From Via Vera Cruz to Bent Avenue/Craven Road, widen roadway to 4-lane secondary arterial
2025	SM32	San Marcos	Via Vera Cruz Bridge and Street Improvements	From San Marcos Boulevard to Discovery Street, widen to 4-lane secondary arterial and construct a bridge at San Marcos Creek
2025	SM42	San Marcos	Street Improvements: Discovery St - Craven Rd to West of Twin Oaks Valley Rd	In the City of San Marcos, on Discovery Street from Craven Road to west of Twin Oaks Valley Road, construct approximately 5,100 lineal feet of a new 6-lane roadway
2025	SM43	San Marcos	Street Improvements and Widening on Barham Dr	Twin Oaks Valley Road to La Moree Road in the City of San Marcos, on Barham Drive between Twin Oaks Valley Road and La Moree Road, widen and reconstruct the north side of Barham Drive to a 6-lane prime arterial and associated work

**Table B.15 (continued)**

**Revenue Constrained Scenario: Arterial Projects**

Conformity				
Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
2025	SM48	San Marcos	Creekside Dr	Construct approximately 3,000 feet of a 2-lane collector road from Via Vera Cruz to Grand Avenue in the City of San Marcos. The road will include two 12-foot lanes, diagonal parking on the north side, and parallel parking on the south side. In addition, the project also will include a 10-foot bike trail meandering along the south side.
2025	SM55	San Marcos	Borden Rd Widening and Improvements	Borden Road from Vineyard to Richland, widening of Borden Road will add an additional roadway capacity to accommodate increase in traffic volumes
2035	SD81	San Diego	Genesee Ave - Nobel Dr to SR 52	In San Diego, future widening to 6-lane major street north of Decoro Street and to a 6-lane primary arterial south of Decoro Street and included Class II bicycle lanes (CIP 52-458.0)
2035	SD190	San Diego	Palm Avenue/Interstate I-805 Interchange	Phase III will provide the ultimate build-out of the project which will incorporate improvements of Phase II plus the northbound and southbound entrance ramps (CIP 52-640.0)
2035	SM10	San Marcos	SR 78/Smilax	Construct new interchange at Smilax Road interchange and SR 78 improvements

\* The arterials listed in this table reflect locally initiated projects that were submitted by local jurisdictions in the 2014 Regional Transportation Improvement Program.

Pages from 2018 RTIP

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**Table 3-1  
2018 Regional Transportation Improvement Program  
San Diego Region (in \$000s)**

**San Diego, City of**

<b>MPO ID: SD188</b>		<b>ADOPTION: 18-00</b>								
Project Title:	Congestion Relief/Traffic Engineering Operations							TransNet - LSI: CR		
Project Description:	Various locations - congestion relief efforts to include intersection lighting, traffic signal coordination, centrally controlled traffic signal optimization system, traffic data collection for performance monitoring; traffic calming in Smart Growth areas; and project development/preliminary engineering/corridor studies									
Capacity Status: NCI		Exempt Category: Other - Engineering studies								
Est Total Cost: <b>\$35,437</b>										
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>
TransNet - LSI	\$33,405	\$16,986	\$3,284	\$3,284	\$3,284	\$3,284	\$3,284	\$33,405		
TransNet - LSI Carry Over	\$2,032	\$2,032						\$2,032		
<b>TOTAL</b>	<b>\$35,437</b>	<b>\$19,018</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$35,437</b>		

<b>MPO ID: SD190</b>		<b>ADOPTION: 18-00</b>								
Project Title:	<b>Palm Avenue/Interstate 805 Interchange</b>							RTP PG NO: B-41		
Project Description:	On Palm Avenue at Interstate 805; - threshold traffic volumes within the Otay Mesa Community of the City of San Diego have been met, necessitating improvements to the Palm Avenue Bridge over I-805; project will also include repairs to the bridge approaches that are showing signs of failure; a new Project Study Report (PSR) and Preliminary Environmental Assessment Report (PEAR) are needed to consider all conditions within the project vicinity - Phase II of the project will include widening of the bridge, realignment of existing ramps, possible addition of northbound looping entrance ramp, restriping of traffic lanes, and signal modifications; Phase III will provide the ultimate build-out of the project which will incorporate improvements of Phase II plus the northbound and southbound entrance ramps (CIP 52-640.0)									
Capacity Status: CI		Exempt Category: Non-Exempt								
Est Total Cost: <b>\$34,869</b> Open to Traffic: Phase 1: Jun 2008    Phase 2: Jun 2020    Phase 3: Jun 2028										
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>
Local Funds	\$34,869	\$7,369		\$27,500				\$7,119	\$250	\$27,500
<b>TOTAL</b>	<b>\$34,869</b>	<b>\$7,369</b>		<b>\$27,500</b>				<b>\$7,119</b>	<b>\$250</b>	<b>\$27,500</b>

<b>MPO ID: SD200</b>		<b>ADOPTION: 18-00</b>								
Project Title:	SR94/Euclid Avenue Interchange Improvements							RAS (M-43)		
Project Description:	Intersection at Euclid Avenue and SR-94 - improvements to the interchange to enhance safety features through this corridor and the optimization of the level of service for both Euclid Avenue and SR 94 (S14009)									
Capacity Status: NCI		Exempt Category: Other - Interchange reconfiguration projects								
Est Total Cost: <b>\$4,075</b>										
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>
TransNet - LSI	\$713	\$713								\$713
TransNet - LSI Carry Over	\$2,337		\$2,337							\$2,337
Local RTCIP	\$1,025	\$1,025						\$825		\$200
<b>TOTAL</b>	<b>\$4,075</b>	<b>\$1,738</b>	<b>\$2,337</b>					<b>\$825</b>		<b>\$3,250</b>

**Table 3-1  
2018 Regional Transportation Improvement Program  
San Diego Region (in \$000s)**

**San Diego, City of**

<b>MPO ID: SD188</b>		<b>ADOPTION: 18-00</b>									
Project Title:	Congestion Relief/Traffic Engineering Operations									TransNet - LSI: CR	
Project Description:	Various locations - congestion relief efforts to include intersection lighting, traffic signal coordination, centrally controlled traffic signal optimization system, traffic data collection for performance monitoring; traffic calming in Smart Growth areas; and project development/preliminary engineering/corridor studies										
Capacity Status: NCI		Exempt Category: Other - Engineering studies									
Est Total Cost: <b>\$35,437</b>											
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>	
TransNet - LSI	\$33,405	\$16,986	\$3,284	\$3,284	\$3,284	\$3,284	\$3,284	\$33,405			
TransNet - LSI Carry Over	\$2,032	\$2,032						\$2,032			
<b>TOTAL</b>	<b>\$35,437</b>	<b>\$19,018</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$3,284</b>	<b>\$35,437</b>			

<b>MPO ID: SD190</b>		<b>ADOPTION: 18-00</b>									
Project Title:	Palm Avenue/Interstate 805 Interchange									RTP PG NO: B-41	
Project Description:	On Palm Avenue at Interstate 805; - threshold traffic volumes within the Otay Mesa Community of the City of San Diego have been met, necessitating improvements to the Palm Avenue Bridge over I-805; project will also include repairs to the bridge approaches that are showing signs of failure; a new Project Study Report (PSR) and Preliminary Environmental Assessment Report (PEAR) are needed to consider all conditions within the project vicinity - Phase II of the project will include widening of the bridge, realignment of existing ramps, possible addition of northbound looping entrance ramp, restriping of traffic lanes, and signal modifications; Phase III will provide the ultimate build-out of the project which will incorporate improvements of Phase II plus the northbound and southbound entrance ramps (CIP 52-640.0)									RAS (M - 48)	
Capacity Status: CI		Exempt Category: Non-Exempt									
Est Total Cost: <b>\$34,869</b> Open to Traffic: Phase 1: Jun 2008      Phase 2: Jun 2020      Phase 3: Jun 2028											
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>	
Local Funds	\$34,869	\$7,369		\$27,500				\$7,119	\$250	\$27,500	
<b>TOTAL</b>	<b>\$34,869</b>	<b>\$7,369</b>		<b>\$27,500</b>				<b>\$7,119</b>	<b>\$250</b>	<b>\$27,500</b>	

<b>MPO ID: SD200</b>		<b>ADOPTION: 18-00</b>									
Project Title:	SR94/Euclid Avenue Interchange Improvements									RAS (M-43)	
Project Description:	Intersection at Euclid Avenue and SR-94 - improvements to the interchange to enhance safety features through this corridor and the optimization of the level of service for both Euclid Avenue and SR 94 (S14009)									TransNet - LSI: CR	
Capacity Status: NCI		Exempt Category: Other - Interchange reconfiguration projects									
Est Total Cost: <b>\$4,075</b>											
	<b>TOTAL</b>	<b>PRIOR</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>PE</b>	<b>RW</b>	<b>CON</b>	
TransNet - LSI	\$713	\$713								\$713	
TransNet - LSI Carry Over	\$2,337		\$2,337							\$2,337	
Local RTCIP	\$1,025	\$1,025						\$825		\$200	
<b>TOTAL</b>	<b>\$4,075</b>	<b>\$1,738</b>	<b>\$2,337</b>					<b>\$825</b>		<b>\$3,250</b>	



**Table F-13 (continued)**

**Phased Arterial Projects – 2018 Regional Transportation Improvement Program**

Conformity Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
2020	ESC06	Escondido	El Norte Pkwy Bridge at Escondido Creek - Kaile Ln to Key Lime Way	Construct missing 2-lane bridge at Escondido Creek
2020	ESC09	Escondido	Ninth Ave – La Terraza Blvd to Spruce St	Widen from 2 to 4 lanes with raised median and modify traffic signals at Ninth Avenue and Tulip Street - design phase
2020	ESC24	Escondido	Centre City Pkwy	Mission Road to SR 78, widen 4 lanes to 6 lanes with intersection improvements
2020	NC01	National City	Plaza Blvd Widening	Plaza Boulevard from Highland Avenue to N Avenue, widen from 2 to 3 lanes, including a new traffic lane in each direction, new sidewalks, sidewalk widening, traffic signal upgrades, and interconnection at Plaza Boulevard
2020	O06	Oceanside	Melrose Dr Extension	Melrose Drive from North Santa Fe Avenue to Spur Avenue - in Oceanside, future construction of Melrose Drive; 4-lane arterial highway with medians, sidewalks, and bike lanes between North Santa Fe Avenue and Spur Avenue
2020	SD102A	San Diego	Otay Truck Route Widening	On Otay Truck Route in San Diego from Drucker Lane to La Media, add 1 lane (total 3 lanes) for trucks; from Britannia to La Media, add 1 lane for trucks and one lane for emergency vehicles (border patrol/fire department access); add one lane for trucks along Britannia from Britannia Court to the Otay Truck Route
2020	SD189	San Diego	Sea World Dr Widening and I-5 Interchange Improvements	In San Diego, replace existing 4-lane bridge with an 8-lane bridge with new on/off ramps; widen approach ways to add right-turn lanes to improve access to Interstate 5 (CIP 52-706.0)
2020	SD190	San Diego	Palm Ave/I-805 Interchange	Improvements to the Palm Avenue Bridge over I-805, including repairs to the bridge approaches; a new Project Study Report (PSR) and Preliminary Environmental Assessment Report (PEAR). Phase II of the project will include widening of the bridge, realignment of existing ramps, possible addition of northbound looping entrance ramp, restriping of traffic lanes, and signal modifications

**Table F-13 (continued)**

**Phased Arterial Projects – 2018 Regional Transportation Improvement Program**

Conformity Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
2020	ESC06	Escondido	El Norte Pkwy Bridge at Escondido Creek - Kaile Ln to Key Lime Way	Construct missing 2-lane bridge at Escondido Creek
2020	ESC09	Escondido	Ninth Ave – La Terraza Blvd to Spruce St	Widen from 2 to 4 lanes with raised median and modify traffic signals at Ninth Avenue and Tulip Street - design phase
2020	ESC24	Escondido	Centre City Pkwy	Mission Road to SR 78, widen 4 lanes to 6 lanes with intersection improvements
2020	NC01	National City	Plaza Blvd Widening	Plaza Boulevard from Highland Avenue to N Avenue, widen from 2 to 3 lanes, including a new traffic lane in each direction, new sidewalks, sidewalk widening, traffic signal upgrades, and interconnection at Plaza Boulevard
2020	O06	Oceanside	Melrose Dr Extension	Melrose Drive from North Santa Fe Avenue to Spur Avenue - in Oceanside, future construction of Melrose Drive; 4-lane arterial highway with medians, sidewalks, and bike lanes between North Santa Fe Avenue and Spur Avenue
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2020	SD190	San Diego	Palm Ave/I-805 Interchange	Improvements to the Palm Avenue Bridge over I-805, including repairs to the bridge approaches; a new Project Study Report (PSR) and Preliminary Environmental Assessment Report (PEAR). Phase II of the project will include widening of the bridge, realignment of existing ramps, possible addition of northbound looping entrance ramp, restriping of traffic lanes, and signal modifications

**Table F-13 (continued)**

**Phased Arterial Projects – 2018 Regional Transportation Improvement Program**

Conformity Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
2030	NC01	National City	Plaza Blvd Widening	Plaza Boulevard from I-805 to Euclid Avenue, widen from 2 to 3 lanes, including a new traffic lane in each direction, new sidewalks, sidewalk widening, traffic signal upgrades, and interconnection at Plaza Boulevard
2030	SM19	San Marcos	Grand Ave Bridge and Street Improvements	From Discovery Street to San Marcos Boulevard, construct 4-lane arterial bridge and a 6-lane arterial street from Craven to Grand Avenue
2030	SM24	San Marcos	Woodland Pkwy Interchange Improvements	From La Moree Road to Rancheros Drive, modify existing ramps at Woodland Parkway and Barham Drive; widen and realign SR 78 undercrossing and associated work
2030	SM32	San Marcos	Via Vera Cruz Bridge and Street Improvements	From San Marcos Boulevard to Discovery Street, widen to 4-lane secondary arterial and construct a bridge at San Marcos Creek
2030	SM42	San Marcos	Street Improvements: Discovery St - Craven Rd to West of Twin Oaks Valley Rd	In the City of San Marcos, on Discovery Street from Craven Road to west of Twin Oaks Valley Road, construct approximately 5,100 lineal feet of a new 6-lane roadway
2030	SD190	San Diego	Palm Avenue/Interstate I-805 Interchange	Phase III will provide the ultimate build-out of the project which will incorporate improvements of Phase II plus the northbound and southbound entrance ramps (CIP 52-640.0)
2030	SM10	San Marcos	SR 78/Smilax	Construct new interchange at Smilax Road interchange and SR 78 improvements
2040	SD81	San Diego	Genesee Ave - Nobel Dr to SR 52	In San Diego, future widening to 6-lane major street north of Decoro Street and to a 6-lane primary arterial south of Decoro Street and included Class II bicycle lanes (CIP 52-458.0)

**Endnotes**

- <sup>1</sup> San Diego Forward: The Regional Plan Appendix T: SANDAG Travel Demand Model and Forecasting Documentation includes additional detail regarding the overall model structure.
- <sup>2</sup> Full-time employment is defined in the SANDAG 2006 household survey as at least 30 hours/week. Part-time is less than 30 hours/week on a regular basis.
- <sup>3</sup> GP: general purpose lanes of a freeway.
- <sup>4</sup> Projects listed are included in the San Diego Forward: The Regional Plan and Sustainable Communities Strategy.
- <sup>5</sup> Projects listed are included in the San Diego Forward: The Regional Plan and Sustainable Communities Strategy.

**Table F-13 (continued)**

**Phased Arterial Projects – 2018 Regional Transportation Improvement Program**

Conformity Analysis Year	SANDAG ID	Lead Agency	Project Title	Project Description
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**Endnotes**

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- <sup>2</sup> Full-time employment is defined in the SANDAG 2006 household survey as at least 30 hours/week. Part-time is less than 30 hours/week on a regular basis.
- <sup>3</sup> GP: general purpose lanes of a freeway.
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# APPENDIX F.

U.S. FISH AND WILDLIFE SERVICE AND NOAA FISHERIES SERVICE  
THREATENED AND ENDANGERED SPECIES LISTS

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**U.S. Fish and Wildlife Service**  
**Threatened and Endangered Species List**  
**April 26, 2019**

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## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office  
2177 Salk Avenue - Suite 250  
Carlsbad, CA 92008-7385  
Phone: (760) 431-9440 Fax: (760) 431-5901  
<http://www.fws.gov/carlsbad/>

In Reply Refer To:

April 26, 2019

Consultation Code: 08ECAR00-2019-SLI-0876

Event Code: 08ECAR00-2019-E-02034

Project Name: 1-805/Palm Ave Intersection Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Carlsbad Fish And Wildlife Office**  
2177 Salk Avenue - Suite 250  
Carlsbad, CA 92008-7385  
(760) 431-9440

## Project Summary

Consultation Code: 08ECAR00-2019-SLI-0876

Event Code: 08ECAR00-2019-E-02034

Project Name: 1-805/Palm Ave Intersection Improvements

Project Type: TRANSPORTATION

Project Description: this Project proposes to improve the Interstate 805 (I-805)/Palm Avenue Interchange (Interchange).

The primary purpose of the proposed Project is to accomplish the following:

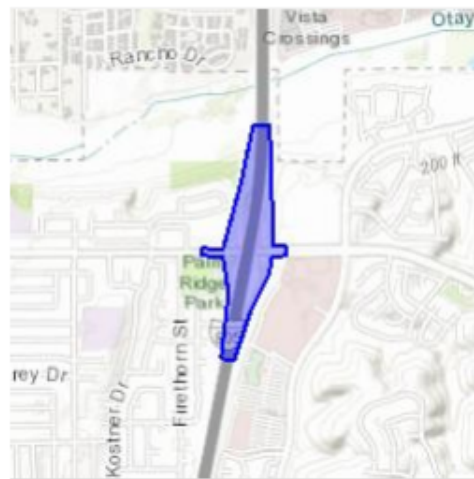
- Reduce congestion during peak periods;
- Reduce delay on Palm Avenue at the Interchange and adjacent signalized intersections;
- Increase traffic signal storage lengths to prevent conflicts between turn and through movements;
- Increase on-ramp storage to enhance Interchange and freeway operations;
- Incorporate "Complete Streets" concepts within the context of the community. "Complete Street" is defined by Caltrans as "A transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the function and context of the facility;"
- Incorporate features that accommodate high-occupancy vehicle (HOV) and transit operations;
- Incorporate features that accommodate local traffic resulting from the implementation of the Otay Mesa Community Plan and allow transportation goals of the Otay Mesa Community Plan to be met; and
- Upgrade bridge approaches to address structural integrity.

Expected Construction of first phase is 2022-2024.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/32.58410232229815N117.03696151113137W>





Counties: San Diego, CA

## Endangered Species Act Species

There is a total of 18 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Pacific Pocket Mouse <i>Perognathus longimembris pacificus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8080">https://ecos.fws.gov/ecp/species/8080</a>	Endangered

## Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8178">https://ecos.fws.gov/ecp/species/8178</a>	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5945">https://ecos.fws.gov/ecp/species/5945</a>	Endangered
Light-footed Clapper Rail <i>Rallus longirostris levipes</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6035">https://ecos.fws.gov/ecp/species/6035</a>	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6749">https://ecos.fws.gov/ecp/species/6749</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened

## Insects

NAME	STATUS
Quino Checkerspot Butterfly <i>Euphydryas editha quino</i> (= <i>E. e. wrighti</i> ) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5900">https://ecos.fws.gov/ecp/species/5900</a>	Endangered

## Crustaceans

NAME	STATUS
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8148">https://ecos.fws.gov/ecp/species/8148</a>	Endangered
San Diego Fairy Shrimp <i>Branchinecta sandiegonensis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6945">https://ecos.fws.gov/ecp/species/6945</a>	Endangered

## Flowering Plants

NAME	STATUS
California Orcutt Grass <i>Orcuttia californica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4923">https://ecos.fws.gov/ecp/species/4923</a>	Endangered
Otay Mesa-mint <i>Pogogyne nudiuscula</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5362">https://ecos.fws.gov/ecp/species/5362</a>	Endangered
Otay Tarplant <i>Deinandra (= Hemizonia) conjugens</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5687">https://ecos.fws.gov/ecp/species/5687</a>	Threatened
Salt Marsh Bird's-beak <i>Cordylanthus maritimus ssp. maritimus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6447">https://ecos.fws.gov/ecp/species/6447</a>	Endangered
San Diego Ambrosia <i>Ambrosia pumila</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8287">https://ecos.fws.gov/ecp/species/8287</a>	Endangered
San Diego Button-celery <i>Eryngium aristulatum var. parishii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5937">https://ecos.fws.gov/ecp/species/5937</a>	Endangered
San Diego Thornmint <i>Acanthomintha ilicifolia</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/351">https://ecos.fws.gov/ecp/species/351</a>	Threatened
Spreading Navarretia <i>Navarretia fossalis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1334">https://ecos.fws.gov/ecp/species/1334</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

**NOAA Fisheries Service**  
**Official Threatened and Endangered Species List**  
**April 16, 2019**

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**Li, San@DOT**

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**From:** Galloway, Michael@DOT  
**Sent:** Tuesday, April 16, 2019 8:50 AM  
**To:** Li, San@DOT  
**Subject:** FW: FW: Caltrans Interstate 805 Palm Avenue Interchange Project

NOAA confirmed submittal of the species list. See below.

*Michael Galloway*

Associate Biologist  
Environmental Stewardship & Ecological Studies  
California Department of Transportation, District 11  
4050 Taylor Street, MS-242, San Diego, CA 92110  
(619) 688-0191

**From:** NMFSWCRCA Specieslist - NOAA Service Account <nmfswcrca.specieslist+canned.response@noaa.gov>  
**Sent:** Tuesday, April 16, 2019 8:48 AM  
**To:** Galloway, Michael@DOT <michael.galloway@dot.ca.gov>  
**Subject:** Re: FW: Caltrans Interstate 805 Palm Avenue Interchange Project

Receipt of this message confirms that NMFS has received your email to [nmfswcrca.specieslist@noaa.gov](mailto:nmfswcrca.specieslist@noaa.gov). If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page ([http://www.westcoast.fisheries.noaa.gov/maps\\_data/california\\_species\\_list\\_tools.html](http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html)), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

**Li, San@DOT**

**From:** Galloway, Michael@DOT  
**Sent:** Tuesday, April 16, 2019 8:50 AM  
**To:** Li, San@DOT  
**Subject:** FW: Caltrans Interstate 805 Palm Avenue Interchange Project

**From:** Galloway, Michael@DOT  
**Sent:** Tuesday, April 16, 2019 8:48 AM  
**To:** nmfswcrca.specieslist@noaa.gov  
**Subject:** FW: Caltrans Interstate 805 Palm Avenue Interchange Project

The California Department of Transportation (Caltrans) is the non-federal agency delegated by the Federal Highway Administration for NEPA and Section 7 consultations. Caltrans is providing agency oversight for the Interstate 805 Palm Avenue Interchange Project in San Diego County. A search was completed for ESA Listed Species within the Imperial Beach Quadrangle 32117-E1. The Interstate 805 Palm Avenue Interchange Project avoids all impacts to waters of the U.S. and wetlands. Therefore, no impacts to the ESA Listed Species below are anticipated. The contact information is provided below.

Quad Name **Imperial Beach**  
Quad Number **32117-E1**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) -  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) - **X**  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) -

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat -

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

### **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**  
Olive Ridley Sea Turtle (T/E) -  
Leatherback Sea Turtle (E) -  
North Pacific Loggerhead Sea Turtle (E) -

### **ESA Whales**

Blue Whale (E) -  
Fin Whale (E) -  
Humpback Whale (E) -  
Southern Resident Killer Whale (E) -  
North Pacific Right Whale (E) -  
Sei Whale (E) -  
Sperm Whale (E) -

### **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

### **Essential Fish Habitat**

Coho EFH -  
Chinook Salmon EFH -  
Groundfish EFH - **X**

Coastal Pelagics EFH - **X**  
Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans -  
MMPA Pinnipeds - **X**

***Michael Galloway***

Associate Biologist  
Environmental Stewardship & Ecological Studies  
California Department of Transportation, District 11  
4050 Taylor Street, MS-242, San Diego, CA 92110  
(619) 688-0191

# APPENDIX G.

FHWA AIR QUALITY CONFORMITY DETERMINATION

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U.S. Department  
of Transportation

**Federal Highway  
Administration**

**Federal Highway Administration  
California Division**

May 14, 2019

650 Capitol Mall, Suite 4-100  
Sacramento, CA 95814  
(916) 498-5001  
(916) 498-5008 (fax)

In Reply Refer To:  
HDA-CA

Cory Binns, Acting District Director  
California Department of Transportation  
District 11  
4050 Taylor Street, M.S. 242  
San Diego, CA 92110

Attention: San Li

Dear Mr. Binns:

SUBJECT: Project Level Conformity Determination for the I-805/Palm Avenue Interchange Project (CTIPS ID 52-640)

On April 15, 2019, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a complete request for a project level conformity determination for the I-805/Palm Avenue Interchange Project. The project is in an area that is designated Non-Attainment or Maintenance for Ozone.

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the San Diego Association of Governments' (SANDAG) current Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), as amended. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

Based on the information provided, FHWA finds that the I-805/Palm Avenue Interchange Project conforms with the State Implementation Plan (SIP) in accordance with 40 CFR Part 93.

If you have any questions pertaining to this conformity finding, please contact Joseph Vaughn at (916) 498-5346 or by email at [Joseph.Vaughn@dot.gov](mailto:Joseph.Vaughn@dot.gov).

Sincerely,

Tashia J. Clemmons  
Director, Planning and Environment

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