

Interstate 15 Corridor Project

Cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana
Riverside and San Bernardino Counties, California

DISTRICT 8 – RIV – 15 (PM 49.8/52.3), SBD – 15 (PM 0.0/12.2)
PN 0812000184 / EA 08-0R8000

Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation
and San Bernardino County Transportation Authority

December 2018



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 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

General Information about This Document

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study with Mitigated Negative Declaration/Environmental Assessment for the proposed project located in San Bernardino and Riverside Counties, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and 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 project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study with Proposed Mitigated Negative Declaration Environmental Assessment (Draft Environmental Document, or DED) circulated to the public for 30 days between February 15, 2018 and March 16, 2018. Comments received in conjunction with the circulation of the DED are included in Chapter 4. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the circulation of the DED. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and the related technical studies are available for review at San Bernardino County Transportation Authority's office, located at 1170 West Third Street, 2nd Floor, San Bernardino, CA 92410. This document may be downloaded at the following website: www.gosbcta.com/i15corridor

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 write to San Bernardino County Transportation Authority (SBCTA), Attn: Tim Watkins, SBCTA, 1170 West Third Street, 2nd Floor, San Bernardino, CA 92410; call (909) 884-8276 (voice); or use the California Relay Service, at 1(909) 383-6300 (TTY).

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SCH# 2018021044
08-RIV-15-PM 49.8/52.3
08-SBD-15-PM 0.0/12.2
EA 08-OR8000
PN 0812000184

Construct tolled Express Lanes, in both directions on Interstate 15, from approximately 0.3 miles south of Cantu-Galleano Ranch Road in the Cities of Eastvale and Jurupa Valley at Post Mile (PM) 49.8 in Riverside County, to the Riverside/San Bernardino County line (PM 49.8/52.3), continuing from the Riverside/San Bernardino County line to approximately 1.2 miles north of Duncan Canyon Road at PM 12.2 (PM 0.0/12.2) in the City of Fontana in San Bernardino County.

**INITIAL STUDY with Mitigated Negative Declaration / Environmental Assessment
with Finding of No Significant Impact**

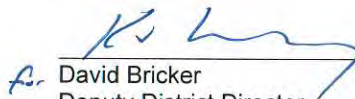
Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C), 49 USC 303, and/or 23 USC 138

THE STATE OF CALIFORNIA
Department of Transportation

and

San Bernardino County Transportation Agency

12/20/18
Date of Approval


David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation
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MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to construct one to two tolled express lanes along Interstate 15 (I-15) through the cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana in Riverside and San Bernardino counties, California.

Determination

An Initial Study has been prepared for this project, and following public review, Caltrans has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on:

- Farmlands and Timberlands, and Land Use.

In addition, the proposed project would have less-than-significant effects on:

- Aesthetics and Visual Resources, Air Quality, Noise, Cultural Resources, Floodplains, Water Quality, Community Character and Cohesion, Animals and Plants, and Threatened and Endangered Species.

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

- Paleontological Resource

P-1: A Paleontological Mitigation Plan (PMP) that follows Caltrans guidelines and the recommendations of the Society of Vertebrate Paleontology (SVP) will be prepared. The measures in this PMP will be conducted by a qualified vertebrate paleontologist. The PMP is anticipated to include, but not be limited to, the following mitigation measures:

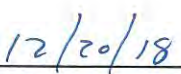
- a. A project-specific PMP will be prepared by a qualified principal paleontologist (MS or PhD in paleontology) once adequate project design information is available regarding location, depth, and lateral extent of subsurface disturbance.
- b. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas may be halted or diverted by the Resident Engineer to allow the prompt recovery of fossils.
- c. Fossils collected during the monitoring and salvage portion of the mitigation program will be prepared to the point of identification, sorted, and cataloged.

- d. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program.
- Waters of the State

WET-4 Project impacts on jurisdictional waters of the U.S. and waters of the state will be mitigated at a minimum 3:1 ratio for permanent impacts and a minimum 1:1 ratio for temporary impacts, at an approved mitigation bank, applicant sponsored mitigation area, or on site. A total of 4.98 acres of mitigation credits will be purchased for project impacts on non-wetland Waters of the US and non-wetland Waters of the State.

for 

David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation



Date

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

FOR

Interstate 15 Corridor Project
RIV – 15 (PM 49.8/52.3), SBD – 15 (PM 0.0/12.2)

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. The Build Alternative includes the construct of tolled Express Lanes, in both directions on Interstate 15, from approximately 0.3 miles south of Cantu-Galleano Ranch Road in the Cities of Eastvale and Jurupa Valley at Post Mile (PM) 49.8 in Riverside County, to the Riverside/San Bernardino County line (PM 49.8/52.3), continuing from the Riverside/San Bernardino County line to approximately 1.2 miles north of Duncan Canyon Road at PM 12.2 (PM 0.0/12.2) in the City of Fontana in San Bernardino County.

This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment (EA) and the associated Technical Studies and Design documents, 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 and the associated Technical Studies and design documents.

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.

12/20/18

Date

for

12/20/18

David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation

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Table of Contents

FOLDER 1	Page
CHAPTER 1. PROPOSED PROJECT	1-1
1.1 NEPA Assignment.....	1-1
1.2 Introduction	1-1
1.3 Background.....	1-5
1.4 Purpose and Need	1-6
1.4.1 Purpose	1-6
1.4.2 Need.....	1-6
1.5 Independent Utility and Logical Termini	1-17
1.6 Project Description	1-18
1.6.1 Alternatives.....	1-18
1.7 Identification of the Preferred Alternative.....	1-86
1.8 Alternatives Considered but Eliminated from Further Discussion Prior to the “DRAFT” Initial Study/Environmental Assessment (IS/EA)	1-87
1.9 Permits and Approvals Needed	1-92
CHAPTER 2. AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	2-1
2.1 Human Environment	2-1
2.1.1 Land Use.....	2-1
2.1.2 Parks and Recreational Facilities.....	2-34
2.1.3 Growth.....	2-49
2.1.4 Farmlands/Timberlands	2-53
2.1.5 Community Character and Cohesion.....	2-93
2.1.6 Relocation and Real Property Acquisition	2-119
2.1.7 Environmental Justice	2-121
2.1.8 Utilities/Emergency Services	2-133
2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities	2-136
2.1.10 Visual/Aesthetics.....	2-186
2.1.11 Cultural Resources.....	2-220
2.2 Physical Environment.....	2-230
2.2.1 Hydrology and Floodplain.....	2-230
2.2.2 Water Quality and Storm Water Runoff.....	2-238
2.2.3 Geology/Soils/Seismicity/Topography.....	2-252
2.2.4 Paleontology	2-264
2.2.5 Hazardous Waste/Materials.....	2-269
2.2.6 Air Quality.....	2-284
2.2.7 Noise.....	2-311

	Page
2.3 Biological Environment.....	2-444
2.3.1 Natural Communities.....	2-444
2.3.2 Wetlands and Other Waters.....	2-535
2.3.3 Plant Species.....	2-540
2.3.4 Animal Species.....	2-546
2.3.5 Threatened and Endangered Species	2-560
2.3.6 Invasive Species	2-641
2.4 Cumulative Impacts.....	2-646
2.4.1 Regulatory Setting.....	2-646
2.4.2 Methodology.....	2-646
2.4.3 Cumulative Impact Analysis	2-647
 FOLDER 2	
 CHAPTER 3. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	
EVALUATION	3-1
3.1 Determining Significance Under CEQA	3-1
3.1.1 CEQA Environmental Checklist	3-1
3.2 Climate Change	3-32
3.2.1 Regulatory Setting.....	3-32
3.2.2 Environmental Setting.....	3-36
3.2.3 Project Analysis.....	3-37
3.2.4 CEQA Conclusion	3-42
3.2.5 Greenhouse Gas Reduction Strategies.....	3-43
3.2.6 Project-Level GHG Reduction Strategies.....	3-45
3.2.7 Adaptation Strategies.....	3-46
 CHAPTER 4. COMMENTS AND COORDINATION	
4-1	
4.1 Public Information Meeting.....	4-1
4.2 Consultation and Coordination with Public Agencies.....	4-1
4.2.1 Farmland.....	4-2
4.2.2 Cultural Resources.....	4-2
4.2.3 Interagency Coordination (TCWG).....	4-4
4.2.4 Biological Resources	4-5
4.3 Public Participation	4-6
4.3.1 SBCTA Outreach.....	4-6
4.3.2 Draft Environmental Document Public Circulation	4-8
4.3.3 Comments and Responses to Comments.....	4-27
4.4 Correspondence	4-205

	Page
CHAPTER 5. LIST OF PREPARERS.....	5-1
CHAPTER 6. DISTRIBUTION LIST	6-1

List of Appendices

APPENDIX A RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)
APPENDIX B TITLE VI POLICY STATEMENT
APPENDIX C AVOIDANCE, MINIMIZATION AND/OR MITIGATION SUMMARY
APPENDIX D LIST OF ACRONYMS AND ABBREVIATIONS
APPENDIX E LIST OF TECHNICAL STUDIES
APPENDIX F FHWA PROJECT LEVEL AIR QUALITY CONFORMITY DETERMINATION LETTERS
APPENDIX G PRELIMINARY AND APPROVED JURISDICTIONAL DELINEATIONS

List of Figures

Figure	Page
Figure 1-1. Project Vicinity Map.....	1-2
Figure 1-2. Project Location Map.....	1-3
Figure 1-3. Caltrans Freeway Level of Service.....	1-8
Figure 1-4. Freeway Lane Configuration with Express Lanes.....	1-19
Figure 1-5. Location of Access and Egress Points.....	1-21
Figure 1-6. Alternative 2 (Build Alternative).....	1-27
Figure 2-1. Existing Land Use.....	2-3
Figure 2-2. Study Area Land Uses in the City of Eastvale.....	2-15
Figure 2-3. Study Area Land Uses in the City of Jurupa Valley.....	2-17
Figure 2-4. Study Area Land Uses in the City of Ontario.....	2-19
Figure 2-5. Study Area Land Uses in the City of Rancho Cucamonga.....	2-21
Figure 2-6. Study Area Land Uses in the City of Fontana.....	2-23
Figure 2-7. Public Parks, Trails, and Other Recreational Facilities.....	2-35
Figure 2-8. Pacific Electric Trail.....	2-45
Figure 2-9. Coyote Canyon Park.....	2-47
Figure 2-10. Farmland.....	2-57
Figure 2-11. Study Area Census Block Groups.....	2-95
Figure 2-12. Community Facilities and Services.....	2-105
Figure 2-13. Minority Population Distribution.....	2-125
Figure 2-14. Poverty Level.....	2-129
Figure 2-15. Limits of the Study Area.....	2-137
Figure 2-16. Sub-Region for VHD Analysis.....	2-139
Figure 2-17. Scenic Resources Within the Vicinity of the Interstate 15 Corridor Project.....	2-192
Figure 2-18. Interstate 15 Corridor Project Landscape Units.....	2-194
Figure 2-19. Existing Visual Character of I-15 Within the Project Area.....	2-196
Figure 2-20. Photograph of Existing Views.....	2-198
Figure 2-21. Overview of Key Viewpoint Locations.....	2-202
Figure 2-22. Key Viewpoint 1- Map and Photograph of Existing View.....	2-204
Figure 2-23. View of I-15 from the Jurupa Street Overpass.....	2-205
Figure 2-24. Key Viewpoint 2 - Map and Photograph of Existing View.....	2-207
Figure 2-25. Key Viewpoints 3 and 4 Map.....	2-209
Figure 2-26. Overcrossing of Etiwanda Avenue, Existing and Proposed Conditions (Key View 3).....	2-210
Figure 2-27. Pacific Electric Trail Under I-15, Existing Condition and Proposed Conditions (Key View 4).....	2-213
Figure 2-28. Key Viewpoint 5 - Map and Photograph of the Existing View.....	2-216
Figure 2-29. Approximate Location of Where the Old Spanish Trail Crossed the Area of Potential Effects.....	2-228
Figure 2-30. FEMA Flood Zone Map.....	2-233
Figure 2-31. Location of Flood Study Areas.....	2-235
Figure 2-32. Hydrologic Sub-Area Map.....	2-243
Figure 2-33. Project Watershed and Surface Waterbodies Map.....	2-247
Figure 2-34. Groundwater Basins.....	2-249
Figure 2-35. Location of Faults Map.....	2-257
Figure 2-36. Historic Seismic Activities Map.....	2-259
Figure 2-37. Location of Investigated Structures.....	2-277
Figure 2-38. Monitoring Station Locations.....	2-293

Figure		Page
Figure 2-39.	FHWA Projected National MSAT Emissions Trends 2010 – 2050	2-309
Figure 2-40.	Noise Levels of Common Activities.....	2-313
Figure 2-41.	I-15 Corridor Project - Evaluated Noise Barriers	2-325
Figure 2-42.	Long-Term Monitoring at Site LT-1.....	2-383
Figure 2-43.	Long-Term Monitoring at Site LT-2.....	2-385
Figure 2-44.	Long-Term Monitoring at Site LT-3.....	2-387
Figure 2-45.	Long-Term Monitoring at Site LT-4.....	2-389
Figure 2-46.	Long-Term Monitoring at Site LT-5.....	2-391
Figure 2-47.	Long-Term Monitoring at Site LT-6.....	2-393
Figure 2-48.	Long-Term Monitoring at Site LT-7.....	2-395
Figure 2-49.	Long-Term Monitoring at Site LT-8.....	2-397
Figure 2-50.	Revised Noise Barriers S-344 and S-353.....	2-427
Figure 2-51.	Vegetation Communities and Land Cover Types	2-447
Figure 2-52.	Project Limits within the Western Riverside County MSHCP	2-527
Figure 2-53.	Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment	2-571
Figure 2-54.	Fairy Shrimp Habitat Assessment.....	2-581
Figure 2-55.	Coastal California Gnatcatcher Focused Survey	2-601
Figure 2-56.	San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat.....	2-619
Figure 2-57.	I-15 Corridor Project Cumulative Impact Analysis Projects and Plans Location Map – North.....	2-651
Figure 2-58.	I-15 Corridor Project Cumulative Impact Analysis Projects and Plans Location Map – South.....	2-653
Figure 3-1.	2020 Business as Usual (BAU) Emissions Projection 2014 Edition	3-37
Figure 3-2.	Possible Use of Traffic Operation Strategies in Reducing On-Road CO2 Emissions.....	3-38
Figure 3-3.	The Governor’s Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals	3-43
Figure 4-1.	Southbound Express Lanes Entrance.....	4-43
Figure 4-2.	Public Notice Distribution Limits.....	4-185
Figure 4-3.	I-15 CP Ingress/Egress Access Opening with the Combined SBCTA and RCTC I-15 Corridor Projects at Build Out	4-203

List of Tables

Table	Page
Table 1-1.	Existing Auxiliary Lane Locations 1-5
Table 1-2.	Caltrans Freeway LOS Criteria 1-7
Table 1-3.	I-15 Freeway Density and LOS for Existing, No Build Open to Traffic Year, and No Build at Horizon Year 1-9
Table 1-4.	Existing Truck Traffic 1-10
Table 1-5.	Population Growth Forecast in San Bernardino and Riverside Counties 1-12
Table 1-6.	Population, Household, and Employment 1-12
Table 1-7.	Average Daily Traffic for Existing (2014), 2024 No Build, and 2045 No Build 1-13
Table 1-8.	I-15 Mainline Accident Data 1-14
Table 1-9.	Express Lane Access Points 1-20
Table 1-10.	Structures Widening Within the Project Limits 1-23
Table 1-11.	Soundwalls 1-75
Table 1-12.	Railroad Crossings Within the Project Limits 1-75
Table 1-13.	Arterials with Existing Bike and Pedestrian Facilities 1-77
Table 1-14.	Summary of Value Analysis Study Alternatives 1-89
Table 1-15.	Permits and Approvals 1-92
Table 2-1.	Major Developments Within the Study Area 2-9
Table 2-2.	Consistency with Plans 2-28
Table 2-3.	Parks, Trails, and Other Recreational Facilities Within 0.5 mile of the Project Limits 2-43
Table 2-4.	Age Distribution 2-97
Table 2-5.	Housing Profile 2-99
Table 2-6.	Community Facilities and Services 2-103
Table 2-7.	Labor Force, Unemployment, and Per Capita Income 2-109
Table 2-8.	Commute Mode 2-110
Table 2-9.	Commute Time 2-111
Table 2-10.	Employment, 2012 and 2040 2-112
Table 2-11.	Travel Time 2-117
Table 2-12.	Race and Ethnic Composition 2-123
Table 2-13.	Poverty Level 2-127
Table 2-14.	Local Utility Providers 2-134
Table 2-15.	Potential Affected Utilities 2-135
Table 2-16.	Existing (2014) I-15 Freeway Volumes and LOS 2-140
Table 2-17.	Freeway Mainline Vehicle Classification Counts 2-141
Table 2-18.	Freeway Mainline Vehicle Occupancy Counts 2-143
Table 2-19.	Existing (2014) I-15 Ramp Volumes and LOS 2-144
Table 2-20.	Off-Ramp Queuing Analysis- Existing (2014) Conditions 2-146
Table 2-21.	On-Ramp Metering Analysis - Existing (2014) Conditions 2-146
Table 2-22.	Existing (2014) Vehicle Hours of Delay in Analysis Area 2-147
Table 2-23.	Existing (2014) Study Intersection Traffic Delays and LOS 2-147
Table 2-24.	2024 No Build Alternative I-15 Mainline Traffic Volume, Densities and LOS 2-151
Table 2-25.	2024 Build Alternative I-15 Mainline and Express Lanes Traffic Densities and LOS 2-152
Table 2-26.	2024 Freeway Mainline No Build and Build Alternatives LOS – AM and PM Peak Hours 2-153
Table 2-27.	2024 Build Alternative Express Lanes Access Points Densities and LOS 2-154
Table 2-28.	2024 No Build Alternative I-15 Ramp Volumes and LOS 2-155

Table		Page
Table 2-29.	2024 Build Alternative I-15 Ramp Volumes and LOS.....	2-157
Table 2-30.	2024 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours	2-159
Table 2-31.	Off-Ramp Queuing Analysis – 2024 No Build and Build Alternatives	2-161
Table 2-32.	On-Ramp Metering Analysis – 2024 No Build Alternative.....	2-162
Table 2-33.	On-Ramp Metering Analysis – 2024 Build Alternative	2-162
Table 2-34.	2024 No Build and Build Alternative Vehicle Hours of Delay in the Analysis Area	2-163
Table 2-35.	Forecast Speed by Section in 2024, AM Peak Hour	2-164
Table 2-36.	Forecast Speed by Section in 2024, PM Peak Hour	2-165
Table 2-37.	2024 No Build and Build Alternatives Intersections LOS Analysis	2-166
Table 2-38.	2045 No Build Alternative I-15 Mainline Traffic Volumes, Densities, and LOS.....	2-168
Table 2-39.	2045 Build Alternative I-15 Freeway Volumes, Densities, and LOS	2-169
Table 2-40.	2045 Freeway Mainline No Build and Build Alternatives LOS – AM and PM Peak Hours.....	2-170
Table 2-41.	2045 Build Alternative Express Lanes Access Points Volumes and LOS.....	2-171
Table 2-42.	2045 No Build Alternative I-15 Ramp Volumes and LOS	2-172
Table 2-43.	2045 Build Alternative I-15 Ramp Volumes and LOS.....	2-175
Table 2-44.	2045 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours	2-177
Table 2-45.	Off-Ramp Queuing Analysis – 2045 No Build and Build Alternatives	2-179
Table 2-46.	On-Ramp Metering Analysis – 2045 No Build Alternative.....	2-180
Table 2-47.	On-Ramp Metering Analysis – 2045 Build Alternative	2-180
Table 2-48.	2045 No Build and Build Alternatives Vehicle Hours of Delay in Analysis Area	2-181
Table 2-49.	Forecast Speed by Freeway Segments in 2045, AM Peak Hour	2-182
Table 2-50.	Forecast Speed by Freeway Segments in 2045, PM Peak Hour	2-183
Table 2-51.	2045 No Build and Build Alternatives Study Intersection Traffic Volumes and LOS	2-184
Table 2-52.	Visual Impact Ratings Using Viewer Response and Resource Change	2-193
Table 2-53.	Key Viewpoints Used in the Visual Impact Analysis	2-201
Table 2-54.	Summary of Key View Ratings	2-218
Table 2-55.	Beneficial Uses of Surface and Ground Waters.....	2-245
Table 2-56.	Groundwater Quality Results - Chino Station (Chino Sub-basin)	2-246
Table 2-57.	Preliminary BMP Treatment Summary	2-251
Table 2-58.	Distance from Nearby Faults 2-255	
Table 2-59.	Locations of Potential Impacts on Paleontologically Sensitive Areas Along the I-15 Alignment.....	2-267
Table 2-60.	Air Pollution Standards and Attainment Status of the South Coast Air Basin.....	2-288
Table 2-61.	Air Quality Data from Upland (ARB 36175), Ontario-Fire Station (ARB 36025), and Ontario-Route 60 (ARB 36036) Monitoring Stations.....	2-294
Table 2-62.	Project Area Mobile-Source Emissions.....	2-297
Table 2-63.	Peak-Hour Approach Lane Volumes Used in the 2003 AQMP Attainment Demonstration.....	2-301
Table 2-64.	Horizon Year Build Alternative Intersection Approach Lane Volumes.....	2-301
Table 2-65.	Prediction of Future I-15 Mainline CO Concentrations (parts per million).....	2-303
Table 2-66.	Estimate of Criteria Pollutant Emissions during Construction (pounds per day).....	2-305
Table 2-67.	Comparison of Years 2014 and 2045 MSAT Emissions in Grams per Day.....	2-308
Table 2-68.	Noise Abatement Criteria	2-312

Table		Page
Table 2-69.	Summary of Short-Term Measurements.....	2-319
Table 2-70.	Long-Term Noise Measurement Data Summary	2-381
Table 2-71.	Long-Term Monitoring at Site LT-1.....	2-382
Table 2-72.	Long-Term Monitoring at Site LT-2.....	2-384
Table 2-73.	Long-Term Monitoring at Site LT-3.....	2-386
Table 2-74.	Long-Term Monitoring at Site LT-4.....	2-388
Table 2-75.	Long-Term Monitoring at Site LT-5.....	2-390
Table 2-76.	Long-Term Monitoring at Site LT-6.....	2-392
Table 2-77.	Long-Term Monitoring at Site LT-7.....	2-394
Table 2-78.	Long-Term Monitoring at Site LT-8.....	2-396
Table 2-79.	Comparison of Measured and Modeled Sound Levels in the TNM	2-398
Table 2-80.	Typical Construction Equipment Noise Levels	2-402
Table 2-81.	Noise Levels for Existing, Future No Build, and Future Build	2-407
Table 2-82.	Noise Levels for Existing, Future No Build, and Future Build	2-417
Table 2-83.	Comparison of Traffic Noise Impacts.....	2-423
Table 2-84.	Comparison of Noise Barrier S-344 and the Barrier S-344 Extension	2-425
Table 2-85.	Comparison of Noise Barrier S-353 and the Barrier S-353 Reduction.....	2-439
Table 2-86.	Comparison of Noise Barrier S-353 and the Reduced Barrier S-353	2-439
Table 2-87.	Comparison of Noise Barrier S-396 and the Barrier S-396 Reduction.....	2-441
Table 2-88.	Comparison of Noise Barrier S-396 and the Reduced Barrier S-396	2-441
Table 2-89.	Biological Study Area and Limits of Disturbance Acreages by Vegetation Community	2-445
Table 2-90.	Build Alternative Impacts on Natural Communities.....	2-526
Table 2-91.	Summary of Potential USACE, RWQCB, and CDFW Jurisdiction.....	2-537
Table 2-92.	Anticipated Project Permitting.....	2-538
Table 2-93.	Anticipated Mitigation Credits for Impacts on Wetlands and Other Waters	2-538
Table 2-94.	Non-Listed Special-Status Plant Species Potential to Occur	2-542
Table 2-95.	Non-Listed Special-Status Wildlife Species Potential to Occur	2-548
Table 2-96.	Threatened and Endangered Species Potential to Occur	2-563
Table 2-97.	Preliminary FESA Effect Findings	2-637
Table 2-98.	Impacts on San Bernardino Kangaroo Rat Critical Habitat.....	2-638
Table 2-99.	Cal-IPC Classified Invasive Species Observed within the BSA.....	2-642
Table 2-100.	Cumulative Impact Analysis Projects and Plans List	2-649
Table 2-101.	Impacts on Natural Communities	2-661
Table 2-102.	Impacts on Potential USACE, RWQCB, and CDFW Jurisdiction	2-663
Table 3-1.	Daily VMT and CO ₂ e Emissions Comparisons, Existing and Future.....	3-40
Table 3-2.	Average Required Fuel Economy (mpg)	3-41
Table 4-1.	Native American Tribes, Groups, and Individuals Contacted for the Project	4-4
Table 4-2.	List of Comments.....	4-27

Chapter 1. Proposed Project

1.1 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, the Department 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, the Department 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 the Department 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 the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

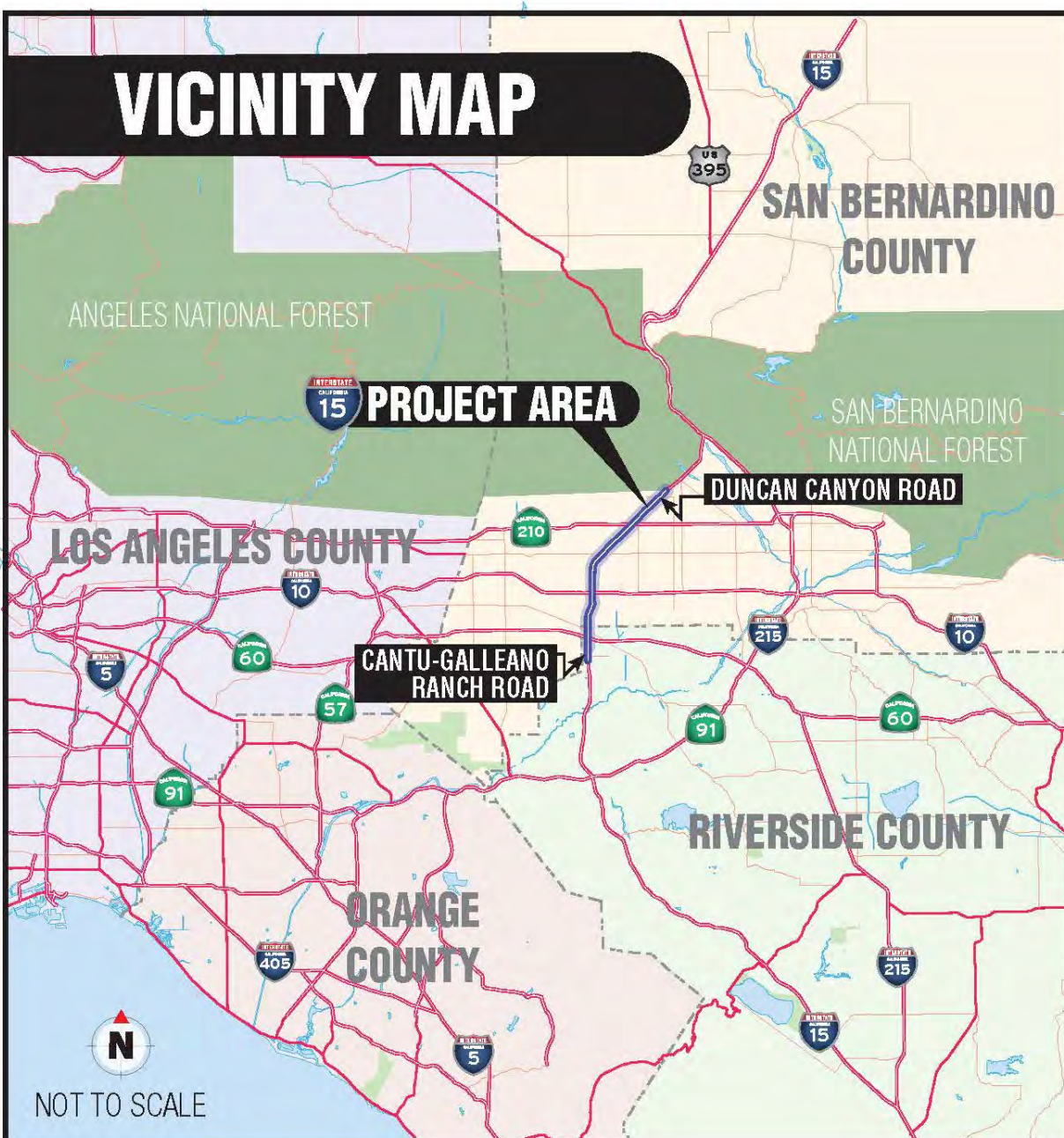
1.2 Introduction

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) and the California Environmental Quality Act (CEQA).

San Bernardino County Transportation Authority (SBCTA) and Caltrans, proposes to construct Express Lanes, including tolled facilities, in both directions of Interstate 15 (I-15) from approximately 0.3 miles south of Cantu-Galleano Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The proposed I-15 Corridor Project (I-15 CP) extends for approximately 14.7 miles from Riverside County (Riv) Post Miles 49.8-52.3 to San Bernardino County (SBd) Post Miles 0.0-12.2. See **Figure 1-1**, the Project Vicinity Map and **Figure 1-2**, Project Location Map. The I-15 CP is included in Southern California Association of Governments’ (SCAG’s) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Amendment 1 and SCAG 2019 Federal Transportation Improvement Program (FTIP) Amendment 1 under Project Number and Project ID 4122006 and 20159901, respectively, and described as:

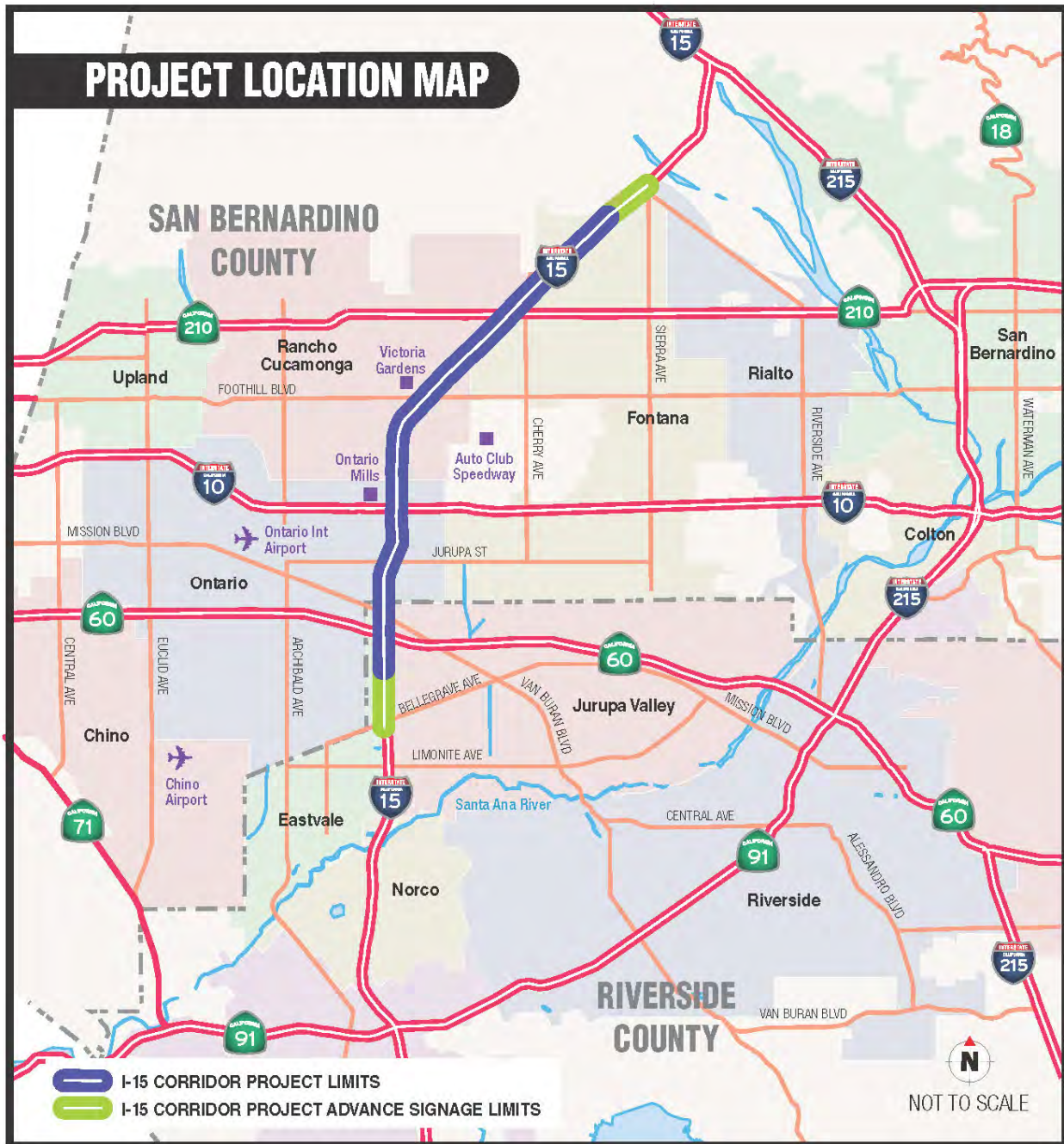
I-15 EXPRESS LANES: CONST 2 NEW EX LNS IN EACH DIRECTION B/W SR-60 & SR-210, CONST 1 EX LN IN EACH DIRECTION B/W CANTU-GALLEANO RANCH RD & SR-60 AND 1 EX LN IN EACH DIRECTION B/W SR-210 AND DUNCAN CANYON RD. ADDITIONAL IMPROVEMENTS TO AUX LN WIDENING, UNDERCROSSINGS, AND RECONSTRUCTION OF RAMPS AND LANE TRANSITIONS WHERE NEEDED.

Figure 1-1. Project Vicinity Map



Source: Google Maps. Prepared for the I-15 CP, 2016.

Figure 1-2. Project Location Map



Source: Google Maps and Preliminary Design plans. Prepared for the I-15 CP, 2017.

The SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017, and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018.

The project would add two Express Lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. This project also proposes to add one Auxiliary Lane in each direction between SR-60 and Interstate 10 (I-10) and one Auxiliary Lane in the northbound (NB) direction between Fourth Street and Foothill Boulevard. The proposed project extends through three freeway-to-freeway system interchanges, including SR-60 in the cities of Eastvale and Jurupa Valley in Riverside County, I-10 in the City of Ontario in San Bernardino County, and SR-210 in the cities of Rancho Cucamonga and Fontana in San Bernardino County. Express Lane advance signage is required a minimum of two miles prior to the start of the Express Lanes. The limits for the planned advance signage at the southerly end extend approximately 1.3 miles south of the Cantu-Galleano Ranch Road Overcrossing (at Post Mile 48.9) and at the northerly end extend approximately 1.6 miles north of the Duncan Canyon Road Overcrossing (at Post Mile 12.6); these constitute the advance signage limits associated with the I-15 Corridor project.

The Riverside County Transportation Commission (RCTC) has proposed improvements on an adjoining portion of I-15, identified as the I-15 Tolled Express Lanes (I-15 TEL) project (08-0J0800), which would include construction of two TEL in each direction from Hidden Valley Parkway, in Norco, to Cantu-Galleano Ranch Road in Eastvale and Jurupa Valley and one TEL in each direction from Cantu-Galleano Ranch Road to SR-60, in Eastvale and Jurupa Valley from Hidden Valley Parkway, in Norco, to end of SR-91 TEL, in Corona, and from El Cerrito Road to Cajalco Road in Corona. The SBCTA proposed I-15 CP, which would add one Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 at the southerly end, provides continuity of two Express Lanes in each direction between RCTC's I-15 TEL project and SBCTA's I-15 CP.

Within the project limits, I-15 has three existing General Purpose (GP) lanes in each direction between Cantu-Galleano Ranch Road interchange and SR-60. Between SR-60 interchange and Duncan Canyon Road overcrossing there are four existing GP lanes in each direction. There are existing Auxiliary Lanes between interchanges as shown in **Table 1-1** below.

Table 1-1. Existing Auxiliary Lane Locations

Location	Direction	No. of Auxiliary Lanes
Cantu-Galleano Ranch Road to SR-60	Northbound (NB)	2
	Southbound (SB)	1
SR-60 to Jurupa Street	NB	None
	SB	None
Jurupa Street to I-10	NB	2
	SB	1
I-10 to Fourth Street	NB	2
	SB	2
Fourth Street to Foothill Boulevard	NB	None
	SB	None
Foothill Boulevard to Baseline Road	NB	None
	SB	None
Baseline Road to SR-210	NB	1
	SB	1
SR-210 to Summit Avenue	NB	1
	SB	1
Summit Avenue to Duncan Canyon Road	NB	None
	SB	None
Source: I-15 As-Built Plans. Caltrans, 2015.		

1.3 Background

Since being built in early 1970 to replace the historical US-66 (Foothill Boulevard), US-91, and former SR-31, I-15 has become a vital lifeline carrying people and freight to and from the Los Angeles metropolitan area. I-15 serves as a commuter corridor from the High Desert to jobs in the Los Angeles Basin, a freight corridor from Los Angeles to the rest of the continent, and the primary route for recreational trips to the High Desert, Las Vegas, Rocky Mountain States, and the Midwest. It is also an important link to Riverside and San Diego counties to the south. I-15 is part of the National Highway System and the Strategic Highway Corridor Network of National Defense.

In 2005, the I-15 Comprehensive Corridor Study Report was completed for SBCTA, SCAG, and Caltrans. The study was prepared to examine future transportation needs along I-15 in the San Bernardino and Victor valleys, and to provide recommendations for improvements and funding strategies. The proposed Express Lanes Build Alternative was developed from the evaluation of improvement strategies and the availability of various revenue sources given the foreseeable project costs.

SBCTA, in cooperation with Caltrans, performed a Preliminary Feasibility Study for I-15 (as well as I-10) in 2009, which was updated in 2010. The study further evaluated viable funding sources and funding requirements for delivering the I-15 CP and found that due to funding limitations, build alternatives other than the Express Lanes would not be financially feasible. Upon consideration of these preliminary feasibility findings and after discussions with Caltrans, SBCTA commenced the preparation of an Advanced Toll Feasibility Study. The focus of the Advanced Toll Feasibility Study

was to conduct preliminary traffic and revenue analysis. The analysis was completed and presented to the SBCTA Board in October 2013. Based on the findings of the Advanced Toll Feasibility Study, the SBCTA Board provided direction to proceed with the preparation of a Project Initiation Document. A Project Study Report-Project Development Support (PSR-PDS) was approved for the project in September 2014, and the project development was advanced to the Project Approval and Environmental Document (PA&ED) phase.

In November 1989, San Bernardino County voters approved Measure I, a half-cent sales tax, to ensure funding is available for the needed transportation projects countywide through 2010. In 2014, San Bernardino County voters approved the extension of the Measure I sales tax to extend the measure through 2040. The proposed project is a component of SBCTA's recent extension of Measure I Plan.

In October 2013, the SBCTA Board of Directors voted to move forward with this project. The project is an element of the SBCTA 10-Year Delivery Plan, with an estimated construction cost of \$338 million and completion of construction by 2024. Construction is estimated to begin in 2021. The project construction is anticipated to be funded with a combination of Measure I, Toll Revenue Bonds, and other state and federal funds.

SBCTA obtained legislative authority to operate toll facilities for San Bernardino County with Assembly Bill 914, which was approved in October 2015. The bill grants SBCTA the authority to toll on the I-10 and I-15 corridors.

1.4 Purpose and Need

1.4.1 Purpose

The purpose of the I-15 CP is to:

- Reduce congestion.
- Increase mainline capacity.
- Improve travel time within the corridor.
- Improve trip reliability and mobility options along the corridor.

1.4.2 Need

The I-15 corridor is experiencing considerable performance problems due to several interrelated factors. These factors include substantial truck volumes (10 to 15 percent of the total traffic), heavy traffic demand on weekdays as well as weekends, and a lack of other reliable travel options. Due to the unique geographic characteristics of the area, the I-15 corridor remains the sole mainline route connecting the Inland Empire and Southern California metropolitan regions with the High Desert, Las Vegas, and beyond. There are no parallel highways that provide comparable direct road travel capability. The traffic demands on I-15 within the project area, arising from recreational and interstate commutes, combined with the recurring regional and interstate freight and goods movement demands, often result in substantial congestion and delays. Traffic demands on the existing capacity of I-15 within the project area, coupled with the

lack of any parallel regional and interregional transportation facilities, as well as the forecasted increase in demand and traffic volumes, are anticipated to further reduce the operational performance and reliability of this part of the state highway system.

1.4.2.1 Capacity, and Transportation Demand, and Safety

Existing Capacity and LOS

The Highway Capacity Manual (HCM) defines level of service (LOS) as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six LOS are defined for mainline freeway segments and weaving segments between interchanges, ranging from “A” for the best operating conditions to “F” for the worst, based on driver’s perceptions of those conditions. The LOS for the project’s freeway mainline and weaving segments were determined using the density analysis methodology in the HCM. Density is calculated based on the traffic volume defined as the number of vehicles within a unit length of the roadway with consideration of the travel speed, which is represented in terms of passenger cars per mile, per lane (pc/mi/ln) for freeway facilities. Calculated density must consider the average speed of the vehicles because a low vehicle count passing within the unit length alone could indicate either low traffic congestion or heavy traffic congestion with extremely slow-moving traffic.

Freeway weaving is defined as the crossing of two streams of traffic traveling in the same direction along a significant length of highway without the aid of traffic control devices. Weaving sections may have a worse LOS than basic freeway sections with comparable (or lower) traffic volumes due to the disruptive effects of weaving on other vehicles.







Table 1-2 presents the density values with the corresponding LOS for the freeway mainline and weaving segments. **Figure 1-3** illustrates representation of the six LOS conditions for freeways. The Caltrans Transportation Concept Report for the study section of I-15 has set “D” as the acceptable LOS for the facility within the project area. The operation of the I-15 Express Lanes is set based on a maximum of 1,650 vehicles per lane per hour (the threshold between LOS C and D) which would result in a minimum operating speed of around 45 mph.

Table 1-2. Caltrans Freeway LOS Criteria

LOS	Basic Freeway Segment Density	Freeway Weaving Segment Density
	(pc/mi/ln)	(pc/mi/ln)
A	0-11.0	≤ 10.0
B	11.0-18.0	>10.0 and ≤ 20.0
C	18.0-26.0	>20.0 and ≤ 28.0
D	26.0-35.0	>28.0 and ≤ 35.0
E	35.0-45.0	>35.0 and ≤ 43.0
F	>45.0	> 43.0

Note: General Purpose (GP) lane LOS is based on density. The first step is to determine if the volumes exceed the capacity (Volume over Capacity ratio is greater than one); if they do, then the LOS is F and no numerical value is determined.
Source: I-15 CP Traffic Study Report, 2017.

Figure 1-3. Caltrans Freeway Level of Service

LEVELS OF SERVICE for Freeways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. No delays
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. No delays
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. Minimal delays
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. Minimal delays
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. Significant delays
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. Considerable delays

Source: Caltrans, Standard Environmental Reference, 2016.

The freeway volumes and LOS for existing conditions, No Build Open-to-Traffic Year 2024, and No Build Horizon Year 2045 are shown in **Table 1-3**. The HCM 2010 methodology for evaluating freeway conditions is a two-step process. The first step is to determine if the volumes exceed the capacity (Volume/Capacity ratio is greater than one); if they do, then the LOS is a degraded LOS F and no numerical value is determined for the density. The existing LOS is at acceptable levels of D to B in most locations, with LOS E and LOS F in several locations. However, the degraded LOS F is found in several segments of the study area.

The No Build freeway volumes and LOS at the proposed opening year (2024), as shown in **Table 1-3**, indicate that traffic conditions would not meet the acceptable LOS D in the AM peak hour in the southbound (SB) direction at most segments south of Beech/Summit Avenue. There would also be capacity deficiencies SB south of I-10 in the AM peak hour, and in the segment between Jurupa Street to I-10 NB in both the AM and PM peak hours. In the horizon year (2045) the No Build I-15 mainline

Table 1-3. I-15 Freeway Density and LOS for Existing, No Build Open to Traffic Year, and No Build at Horizon Year

ID Freeway Segment	Existing				Open-to Traffic (2024)				Horizon (2045)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
I-15 Northbound												
Cantu-Galleano Ranch Rd to SR-60	21.6	C	26.0	C	21.7	C	22.4	C	36.5	E	28.0	D
SR-60 to Jurupa St	25.0	C	26.0	C	26.9	D	33.1	D	37.3	E	40.6	E
Jurupa St to I-10	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F
I-10 to Fourth St	19.2	B	23.9	C	22.3	C	26.6	C	31.3	D	29.4	D
Fourth St to Arrow Rte	18.1	C	29.3	D	20.9	C	32.6	D	31.0	D	38.0	E
Arrow Rte to Foothill Blvd					20.9	C	32.6	D	27.4	D	37.5	E
Foothill Blvd to Baseline Rd	15.1	B	27.1	D	17.9	B	30.5	D	23.5	C	38.1	E
Baseline Rd to SR-210	14.5	B	>Capacity	F	17.0	B	29.3	D	23.9	C	>Capacity	F
SR-210 to Beech/Summit Ave	10.6	B	18.9	B	14.1	B	26.9	C	22.8	C	>Capacity	F
Beech/Summit Ave to Duncan Canyon Rd	10.7	A	16.0	B	13.8	B	22.8	C	20.4	C	30.1	D
Duncan Canyon Rd to Sierra Ave	-	-	-	-	13.6	B	22.3	C	19.6	C	30.4	D
I-15 Southbound												
Sierra Ave to Duncan Canyon Rd	-	-	-	-	22.7	C	16.5	B	34.8	D	21.3	C
Duncan Canyon Rd to Beech/Summit Ave	17.7	B	12.6	B	23.8	C	17.1	B	36.6	E	22.2	C
Beech/Summit Ave to SR-210	>Capacity	F	13.4	B	>Capacity	F	18.1	B	>Capacity	F	25.0	C
SR-210 to Baseline Ave	24.1	C	13.8	B	39.1	E	20.9	C	48.3	F	24.2	C
Baseline Ave to Foothill Blvd	34.0	D	17.6	B	47.0	F	22.8	C	61.0	F	26.6	D
Foothill Blvd to Arrow Rte	41.8	E	21.0	C	54.7	F	28.0	D	71.4	F	30.8	D
Arrow Rte to Fourth St					54.7	F	28.0	D	64.0	F	36.8	E
Fourth St to I-10	29.2	D	21.0	C	34.8	D	27.3	C	36.8	E	34.0	D
I-10 to Jurupa St	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F
Jurupa St to SR-60	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	22.8	C	21.8	C	41.6	E	36.3	E	69.7	F	58.4	F
Note: General Purpose (GP) lane LOS is based on density. The first step is to determine if the volumes exceed the capacity (Volume over Capacity ratio is greater than one); if they do, then the LOS is F and no numerical value is determined. Source: I-15 CP Traffic Study Report, March 2017.												

volumes, at the AM peak hour, would not meet the acceptable LOS in the SB direction anywhere between Duncan Canyon Road and Cantu-Galleano Ranch Road, and NB anywhere between Cantu-Galleano Ranch Road and I-10. In the PM peak hour, the situation is reversed, with nearly the entire corridor operating unacceptably in the NB direction. In the SB direction, unacceptable LOS would occur mostly in the southern portion of the project corridor. Without the increase in capacity, increase in demand and lack of sufficient capacity would continue to cause degradation in Level of Service as shown in **Table 1-3**.

Truck Traffic

Southern California's access to both national and international markets via ports in Los Angeles, Long Beach and San Diego is a key factor in the number of trucks using freeways in the region. Truck traffic contributes to the considerable performance problems experienced by the I-15 corridor. **Table 1-4** indicates that existing truck traffic constitutes 5-17 percent of the overall traffic, with higher rates north of Summit Avenue during the weekday AM and PM peak hours. The data presented in the table also show truck rates at the truck traffic peak hours. However, truck traffic will not be allowed to use the Express Lanes, and the proposed project will not affect the percentage of trucks in the open to traffic and horizon years.

Table 1-4. Existing Truck Traffic

Day (Date)	NORTHBOUND					SOUTHBOUND				
	Passenger Vehicles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total	Passenger Vehicles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total
I-15 North of Beech/Summit Avenue										
Thursday (11/20/2014)										
7-8 AM	1,775	70	14	236	2,095	3,858	57	12	285	4,212
	84.7%	3.3%	0.7%	11.3%	100.0%	91.6%	1.4%	0.3%	6.8%	100.0%
5-6 PM	3,878	59	15	160	4,112	2,529	89	16	289	2,923
	94.3%	1.4%	0.4%	3.9%	100.0%	86.5%	3.0%	0.5%	9.9%	100.0%
Daily	47,243	1,341	353	5,672	54,609	47,022	1,411	365	6,427	55,225
	86.5%	2.5%	0.6%	10.4%	100.0%	85.1%	2.6%	0.7%	11.6%	100.0%
12-1 PM	2,397	64	22	340	2,823	2,268	89	37	340	2,734
	84.9%	2.3%	0.8%	12.0%	100.0%	83.0%	3.3%	1.4%	12.4%	100.0%
Friday (12/05/2014)										
7-8 AM	1,928	57	14	195	2,194	3,840	27	10	292	4,169
	87.9%	2.6%	0.6%	8.9%	100.0%	92.1%	0.6%	0.2%	7.0%	100.0%
5-6 PM	4,417	33	17	200	4,667	3,008	73	39	209	3,329
	94.6%	0.7%	0.4%	4.3%	100.0%	90.4%	2.2%	1.2%	6.3%	100.0%
Daily	58,233	879	394	5,427	64,933	51,704	866	333	5,531	58,434
	89.7%	1.4%	0.6%	8.4%	100.0%	88.5%	1.5%	0.6%	9.5%	100.0%
1-2 AM (NB) 10-11 PM (SB)	3,623	57	25	355	4,060	2,441	70	17	327	2,855
	89.2%	1.4%	0.6%	8.7%	100.0%	85.5%	2.5%	0.6%	11.5%	100.0%
Sunday (12/07/2014)										
Daily	45,238	412	156	1,899	47,705	52,912	479	197	3,042	56,630
	94.8%	0.9%	0.3%	4.0%	100.0%	93.4%	0.8%	0.3%	5.4%	100.0%
10-11 AM (NB) 1-2 PM (SB)	2,430	27	19	115	2,591	3,891	42	14	170	4,117
	93.8%	1.0%	0.7%	4.4%	100.0%	94.5%	1.0%	0.3%	4.1%	100.0%

Table 1-4. Existing Truck Traffic (continued)

Day (Date)	NORTHBOUND					SOUTHBOUND				
	Passenger Vehicles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total	Passenger Vehicles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total
I-15 South of Cantu-Galleano Ranch Road										
Thursday (11/20/2014)										
7-8 AM	4,232	120	25	118	4,495	4,310	183	23	242	4,758
	94.1%	2.7%	0.6%	2.6%	100.0%	90.6%	3.8%	0.5%	5.1%	100.0%
5-6 PM	4,243	143	28	144	4,558	4,593	97	5	106	4,801
	93.1%	3.1%	0.6%	3.2%	100.0%	95.7%	2.0%	0.1%	2.2%	100.0%
Daily	67,447	2,713	545	4,082	74,787	68,033	2,735	554	4,066	75,388
	90.2%	3.6%	0.7%	5.5%	100.0%	90.2%	3.6%	0.7%	5.4%	100.0%
12-1 PM (NB) 8-9 AM (SB)	3,304	206	46	306	3,862	3,814	199	57	272	4,342
	85.6%	5.3%	1.2%	7.9%	100.0%	87.8%	4.6%	1.3%	6.3%	100.0%
Friday (12/05/2014)										
7-8 AM	5,256	84	29	166	5,535	4,664	116	26	253	5,059
	95.0%	1.5%	0.5%	3.0%	100.0%	92.2%	2.3%	0.5%	5.0%	100.0%
5-6 PM	4,379	102	30	154	4,665	5,148	53	19	93	5,313
	93.9%	2.2%	0.6%	3.3%	100.0%	96.9%	1.0%	0.4%	1.8%	100.0%
Daily	75,336	1,650	545	3,676	81,207	75,967	1,691	616	3,657	81,931
	92.8%	2.0%	0.7%	4.5%	100.0%	92.7%	2.1%	0.8%	4.5%	100.0%
12-1 PM (NB) 9-10 AM (SB)	3,889	146	44	284	4,363	3,276	146	56	248	3,726
	89.1%	3.3%	1.0%	6.5%	100.0%	87.9%	3.9%	1.5%	6.7%	100.0%
Sunday (12/07/2014)										
Daily	51,285	764	103	701	52,853	52,770	604	91	844	54,309
	97.0%	1.4%	0.2%	1.3%	100.0%	97.2%	1.1%	0.2%	1.6%	100.0%
6-7 AM (NB) 9-10 PM (SB)	1,150	80	3	25	1,258	1,956	33	7	60	2,056
	91.4%	6.4%	0.2%	2.0%	100.0%	95.1%	1.6%	0.3%	2.9%	100.0%
Source: I-15 CP Traffic Study Report, March 2017.										

Regional Population/Traffic Forecasts

According to the SCAG's 2016 RTP Demographic Growth Forecast, the population and employment of San Bernardino and Riverside counties continues to grow at a higher rate than the rest of the SCAG region. The share of both Riverside and San Bernardino counties' population in the region is anticipated to increase from 23.5 percent in 2015 to 26.6 percent in 2040, while the share of the counties' employment is anticipated to increase from 18.4 percent in 2015 to 22.2 percent in 2040.

Table 1-5 shows the year 2040 SCAG's population projection for the County of Riverside and County of San Bernardino. **Table 1-6** shows the population, household, and employment growth in the year 2040 of the cities within the project area.

Table 1-5. Population Growth Forecast in San Bernardino and Riverside Counties

Jurisdiction	Population			
	2000	2010	2015	2040
Riverside County	1,557,271	2,191,800	2,316,438	3,167,584
San Bernardino County	1,719,190	2,038,771	2,111,258	2,731,321
Source: SCAG, accessed 2017.				

Table 1-6. Population, Household, and Employment

Jurisdiction	Population 2012	Population 2040	Household 2012	Household 2040	Employment 2012	Employment 2040
Rancho Cucamonga	170,100	204,300	55,400	73,100	69,900	104,600
Fontana	200,200	280,900	49,600	74,000	47,000	70,800
Ontario	166,300	258,600	45,100	75,300	103,300	175,400
Eastvale	56,500	65,400	14,100	16,500	4,300	9,800
Jurupa Valley	97,000	114,500	25,000	30,400	24,500	32,600
Source: SCAG, accessed 2017.						

Population growth is an important factor in determining future travel demand. Substantial increases in population, housing, and employment, as projected by SCAG in the 2016-2040 RTP, would result in greater demand for transportation facilities and services. According to the 2016-2040 RTP/SCS, increased travel demand results in congestion on roadways if capacity does not keep up with the demand. I-15 from SR-60 to SR-210 has been identified as a corridor that needs additional capacity to address existing and projected demands from the growth and development that is currently taking place in communities along the I-15 corridor.

Projected Capacity Needs, Delay, and/or Level of Service

The traffic conditions within the project corridor would continue to experience degradation in traffic conditions, and travel time reliability due to the following factors:

Projected Traffic Demand

Table 1-7 shows the projected increase in the Average Daily Traffic (ADT) in the Open-to-Traffic year (2024) and Horizon year (2045). The traffic volumes associated with existing daily traffic demand on some sections of I-15 within the project limits already exceed current capacity. According to the I-15 CP Traffic Study Report, the current average daily traffic on I-15 varies from 214,000 at the Riverside/San Bernardino County line to 136,000 between SR-210 and I-215.

Recurring congestion is observed on a daily basis during weekday peak periods and frequently on weekends. Options for increasing capacity are limited by existing freeway structures and columns, adjacent development, right of way constraints, and lack of traditional funding sources (motor fuel taxes, vehicle registration taxes, sales taxes, bonds, etc.). Additionally, there is currently a lack of other reliable travel options, such as commuter trains or rapid bus service for commuters, or even parallel highways within a practicable distance of the I-15 to be used as an alternative.

Table 1-7. Average Daily Traffic for Existing (2014), 2024 No Build, and 2045 No Build

Freeway Segment	Existing (2014) ADT	2024 No-Project ADT	2045 No-Project ADT
Northbound			
Duncan Canyon Rd to Sierra Ave	53,956	90,709	123,481
Beech/Summit Ave to Duncan Canyon Rd	53,956	75,835	106,157
SR-210 to Beech/Summit Ave	59,160	79,237	110,682
Baseline Rd to SR-210	79,203	86,066	117,493
Foothill Blvd to Baseline Rd	82,778	93,717	117,475
Arrow Rte to Foothill Blvd	91,847	102,411	123,517
Fourth St to Arrow Rte	91,847	102,411	128,873
I-10 to Fourth St	97,019	108,301	134,439
Jurupa St to I-10	107,328	118,822	142,325
SR-60 to Jurupa St	100,079	113,254	137,587
Cantu-Galleano Ranch Rd to SR-60	81,130	95,842	129,215
Southbound			
Sierra Ave to Duncan Canyon Rd	55,213	90,233	121,719
Duncan Canyon Rd to Beech Ave	55,213	74,289	100,509
Beech/Summit Ave to SR-210	65,202	81,277	106,292
SR-210 to Baseline Ave	85,782	102,528	119,462
Baseline Ave to Foothill Blvd	88,334	107,440	120,805
Foothill Blvd to Arrow Rte	101,757	119,944	130,319
Arrow Rte to Fourth St	101,757	119,944	134,097
Fourth St to I-10	100,985	121,476	137,825
I-10 to Jurupa St	107,890	134,001	154,002
Jurupa St to SR-60	101,669	131,315	150,795
SR-60 to Cantu-Galleano Ranch Rd	81,142	122,504	150,325
Source: I-15 CP Traffic Study Report, March 2017.			

Limited Transit Facility Access

The I-15 corridor serves a large number of commuter trips between residential areas in the High Desert (Victor Valley and surrounding areas) and the San Bernardino Valley (as well as more distant locations in Riverside, Orange and Los Angeles counties). Victor Valley is served by the Victor Valley Transit Authority (VVTa), while Omnitrans provides public transportation in the San Bernardino Valley. VVTa operates a commuter bus service between the Victor Valley and San Bernardino Valley using I-215 and local arterials, but no commuter rail service currently exists between the valleys. Currently, there do not appear to be viable transit options that would benefit I-15 travelers within the project area.

Unreliable Speed and Travel Times

According to the traffic study prepared for the project, unreliability in travel time along segments of the roadway from one day to another, and time to time is due to roadway capacity-constraints, accidents, and various factors that cause unanticipated congestion. Factors that can adversely affect travel time reliability within the project corridor include:

- Insufficient capacity during peak hours resulting in delays;

- High traffic volumes during weekends due to the presence of retail locations such as the Citizen Bank Arena, Loan Mart Field, Victoria Gardens and Ontario Mills Malls;
- Special events at such venues as the California Speedway and San Manuel Amphitheater that generate high traffic volumes over time periods of several hours; and
- Significant congestion experienced during holidays and for recreational trips to the High Desert, Las Vegas and beyond.

Safety

Table 1-8. I-15 Mainline Accident Data provides a summary of the available accident information in the most recent three-year period from January 1, 2014 and December 31, 2016. A comparison of actual accident rates with the average statewide accident rates indicate that the I-15 mainline segments experience fatal accident rates that exceeded statewide average at several locations. **Table 1-8** shows the rates that exceeded the statewide average in bold at these locations.

Table 1-8. I-15 Mainline Accident Data

Segment Description	Actual Accident Rates			Average Accident Rates		
	Fatal	F+I	Total	Fatal	F+I	Total
I-15 Northbound						
Limonite Avenue to Cantu-Galleano Ranch Rd	0.000	0.11	0.35	0.008	0.31	0.94
Cantu-Galleano Ranch Rd to SR-60	0.037	0.38	0.86	0.006	0.26	0.79
SR-60 to Riverside/San Bernardino Co line	0.000	0.26	0.82	0.007	0.35	1.07
Riverside/San Bernardino Co line to Jurupa St	0.000	0.11	0.46	0.004	0.34	1.07
Jurupa St to I-10	0.000	0.23	0.78	0.003	0.29	0.93
I-10 to Fourth St	0.000	0.30	0.79	0.003	0.28	0.90
Fourth St to Foothill Blvd	0.000	0.19	0.67	0.003	0.29	0.94
Foothill Blvd to Baseline Ave	0.000	0.07	0.38	0.003	0.28	0.90
Baseline Ave to SR-210	0.000	0.07	0.27	0.003	0.23	0.75
SR-210 to Beech/Summit Ave	0.000	0.14	0.54	0.002	0.19	0.61
Beech/Summit Ave to Sierra Ave	0.005	0.12	0.45	0.003	0.21	0.65
I-15 Southbound						
Sierra Ave to Beech/Summit Ave	0.005	0.10	0.30	0.003	0.21	0.65
Beech/Summit Ave to SR-210	0.013	0.13	0.47	0.002	0.19	0.61
SR-210 to Baseline Ave	0.000	0.23	0.68	0.003	0.23	0.75
Baseline Ave to Foothill Blvd	0.007	0.29	0.84	0.003	0.28	0.90
Foothill Blvd to Fourth St	0.004	0.13	0.52	0.003	0.29	0.94
Fourth St to I-10	0.000	0.35	0.99	0.003	0.28	0.90
I-10 to Jurupa St	0.000	0.53	1.68	0.003	0.29	0.93
Jurupa St to Riverside/San Bernardino Co line	0.000	0.22	0.83	0.004	0.34	1.07
Riverside/San Bernardino Co line to SR-60	0.021	0.26	0.76	0.007	0.35	1.07
SR-60 to Cantu-Galleano Ranch Rd	0.000	0.14	0.58	0.006	0.26	0.79
Cantu-Galleano Ranch Rd to Limonite Ave	0.007	0.22	0.64	0.008	0.31	0.94
Notes: - The "Total"- total accident rates, "F"- Fatal accidents, and "F+I"- fatal + injury accidents -The totals include property-damage-only (non-injury) accidents (which are not shown in this table) -Accident rates in bold indicate actual rates that are higher than statewide average rates for similar facilities Source: Caltrans, Traffic Accident Surveillance and Analysis Systems (TASAS) Table B and TASAS Selective Accident Retrieval (TSAR) for a three-year period between January 1, 2014 and December 31, 2016.						

The analysis of accident data reveals that the prevalent type of accidents within the project limits are rear-end collisions, followed by sideswipe and hit object type collisions.

1.4.2.2 Social Demands or Economic Development

The southern portion of the I-15 CP traverses the cities of Eastvale and Jurupa Valley in Riverside County, and the northern limit of the project continues through the cities of Ontario, Rancho Cucamonga, and Fontana in San Bernardino County.

In the southern areas along the alignment starting from where the corridor crosses Etiwanda Avenue, land uses consist mostly of industrial and commercial development to the southern terminus of the project, just south of SR-60. The northern project limits existing land uses include commercial development, agricultural land, vacant land, and single family residential.

There are no projected changes to existing and planned land use in the project area. It is anticipated that future land use development will continue to occur as designated in the current plans of the local jurisdictions represented in the project area. The existing and future development of the area would result in additional traffic demand and transportation needs. Following is a description of the existing and future land use of the local jurisdictions (See Section 2.1.1 for a detailed description of existing and future land use).

City of Eastvale

The project traverses the City of Eastvale in an area that runs north-south along the eastern border of Eastvale. The portion of the study within the City of Eastvale consists of industrial, commercial, business park, and medium- to high-density residential uses.

There are many planned and current development projects within Eastvale, including logistics, retail, medical, and business park facilities, and industrial developments.

City of Jurupa Valley

The majority of the land within the City of Jurupa Valley is designated by the city's general plan as very low and low-density residential and vacant land. The proposed project runs north-to-south on the western boundary of the city. Land uses adjacent to I-15 include open space and recreation, industrial, commercial, and business park.

Future land use plans focus on preserving the small-town features within the city. No existing or planned major developments were identified within Jurupa Valley.

City of Ontario

The proposed project is located in the eastern portion of the City of Ontario. The land uses adjacent to the proposed project consists of single family and medium density residential uses, commercial, industrial, business park, landfill areas and some green space.

The City of Ontario has identified several major land use development plans in the area near the project area, including residential, commercial, and industrial land development.

City of Rancho Cucamonga

The proposed project is located in the easternmost side of the City of Rancho Cucamonga. Existing land uses within the project area includes several schools and a concentration of commercial, mixed-use, low to medium density residential, and industrial land uses bordering the freeway. The city's flood control/utility corridor also intersects the project area south of Summit Avenue.

The northernmost portion of the I-15 corridor is considered the eastern border for the Equestrian/Overlay District (EOD), which is contained in the city's General Plan land use map. EOD allows for the keeping of horses and other farm animals. All new developments within this overlay zone are required to provide community and local trails for equestrian use.

City of Fontana

The proposed project runs north-south on the western boundary of the City of Fontana. Land uses surrounding the project include commercial, single family and medium- to high-density residential uses, industrial, mixed use and open space.

The Westgate Specific Plan, the largest project within Fontana, would develop residential uses, schools, offices, businesses, and open space on 964 acres of land. The development would be located adjacent to the junction of I-15 and I-210. Other plans located near the project area include a residential corporate office corridor adjacent to I-15 that would include midrise offices, multi-story buildings, hotels, and restaurants, and residential units.

1.4.2.3 Modal Interrelationships and System Linkages

The I-15 is a major interstate goods-movement and commuter corridor route that extends from the junction with I-15 in San Diego County near the border with Mexico, and ends at the border with Canada. The route is functionally classified at the federal level as a Rural/Urban Principal Arterial, and as part of the I-15, is part of the National Highway System (NHS), the Strategic Highway Corridor Network of National Defense (STRAHNET), and the Freeway and Expressway System (F&E). The National Network for Surface Transportation Assistance Act (STAA) also identifies I-15 as a "National Network" route for STAA trucks. I-15 corridor is included in the Federal Primary Freight Network as a key goods movement corridor. The I-15 is classified as a "High Emphasis" and "Gateway" route in the Interregional Road System (IRRS), and serves as a significant goods movement corridor between the Ports of Los Angeles and Long Beach, border crossings with Mexico to destinations nationwide. Within the project limits, the I-15 also serves as a conduit to recreation travel to Las Vegas, San Diego and other destinations, and as a link to main east-west routes including SR-60, I-10, and SR-210.

SCAG's 2016 RTP/SCP identifies an express lanes network that consists of 20 freeway segments. This is part of the effort to develop an enhanced regional transportation management system. The proposed improvements are part of the listed I-15 segment in the County of San Bernardino. The RCTC proposed I-15 TEL south of the I-15 CP limits includes the construction of two Express Lanes in each direction from Hidden Valley Parkway to Cantu-Galleano Ranch Road, and one Express Lane in each direction from Cantu-Galleano Ranch Road to SR-60. The I-15 CP addition of one Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 at the southerly end, provides continuity of two Express Lanes in each direction throughout this section of the I-15 corridor. The I-15 CP ingress/egress access points along the

project limits are designed to provide connectivity of the Express Lanes to the I-10, SR-60, SR-210 facilities.

Although there is no proposed direct connector between the I-15 CP and I-10 Corridor Project Express Lanes, the geometric design and the location of the ingress/egress access points of both projects allow for connectivity through the seamless merging into the GP lanes.

Access to the Ontario International Airport is provided through the linkage to the I-10. Access to passenger rail facilities can be provided from the I-15 through major arterials such as Fourth Street and Foothill Boulevard. Although there are neither rail transit services or express bus services along the I-15 corridor within the project limits, improving travel reliability along the corridor would support future plans for transit services. The Express Lanes would support potential future express bus service, once determined viable by providers such as Riverside Transit Agency (RTA) in Riverside County, and VVTA and Omnitrans in San Bernardino County.

1.5 Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that a proposed project (action) be evaluated for the following:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.¹

Addressing these three criteria includes the appropriate consideration and selection of project limits or “logical termini.” The end points of a project should fully encompass the proposed transportation improvements and their related environmental effects.

The proposed I-15 CP extends 14.7 miles from approximately 0.3 miles south of Cantu-Galleano Ranch Road in the cities of Eastvale and Jurupa Valley in Riverside County to approximately 1.2 miles north of Duncan Canyon Road in the City of Fontana in San Bernardino County, which comprises the logical termini of the project. Improvements within these limits include the urbanized segment of I-15 that demonstrates the highest levels of need due to congestion. **Table 1-3** shown previously demonstrates that the deterioration in travel conditions begins at Beech/Summit Avenue and extends south of SR- 60. For example, LOS in the I-15 SB segment north of Beech/Summit Avenue are shown to range between LOS D and LOS B, while the segments south of Beech/Summit are mostly at LOS E and F, at various peak hour periods. However, the northerly limit of the project was extended to the Duncan Canyon Road limits to allow for the gradual transition of Express Lanes traffic into the traffic of the adjacent GP lanes traffic.

¹ (<http://www.environment.fhwa.dot.gov/projde/tdmtermin.asp>; *The Development of Logical Project Termini*, FHWA, November 5, 1993). Accessed 2016.

The RCTC I-15 TEL project constructs one express lane in each direction within the shared limits with the I-15 CP between Cantu-Galleano Ranch Road and SR-60. The southerly limit of the project was extended into Riverside County to add the second Express Lane between Cantu-Galleano Ranch Road and SR-60 to maintain continuity of operational performance that the Express Lanes are designed to provide.

The project limits extend a sufficient length with the number of proposed Express Lanes to have independent utility in meeting the operational performance requirements. The length of the project also allows for an effective scope for addressing environmental considerations. This proposed project takes into consideration other existing planned improvements within and adjacent to the project limits and would not restrict the consideration of other foreseeable transportation improvements.

1.6 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The purpose of the project is to reduce congestion, increase mainline capacity, improve travel time within the corridor, and improve trip reliability and mobility options along the corridor.

Two alternatives are considered for the project, including the No Build alternative and one Build alternative. The proposed I-15 CP build alternative extends for approximately 14.7 miles from Riv Post Miles 49.8-52.3 to SBd Post Miles 0.0-12.2, and includes the construction of Express Lanes, and Auxiliary Lanes as described in Section 1.6.1.2 below. The proposed improvements occur mostly within the existing right of way limits, so that the construction of the express lanes would meet the capacity needs, yet minimize impacts on the environment, as well, as project cost. Minimal additional right of way is required for the project including three TCE locations and one utility permanent easement. This additional right of way need is described below under Right of Way sub-heading and shown in **Figure 1-6**, Alternative 2 (Build Alternative).

1.6.1 Alternatives

1.6.1.1 Alternative 1 – No Build Alternative

Alternative 1, the No Build Alternative consists of the existing lane configuration for I-15. No capital expenditures would be made to implement mainline improvements within the project limits. Existing and projected traffic congestion conditions would continue to deteriorate.

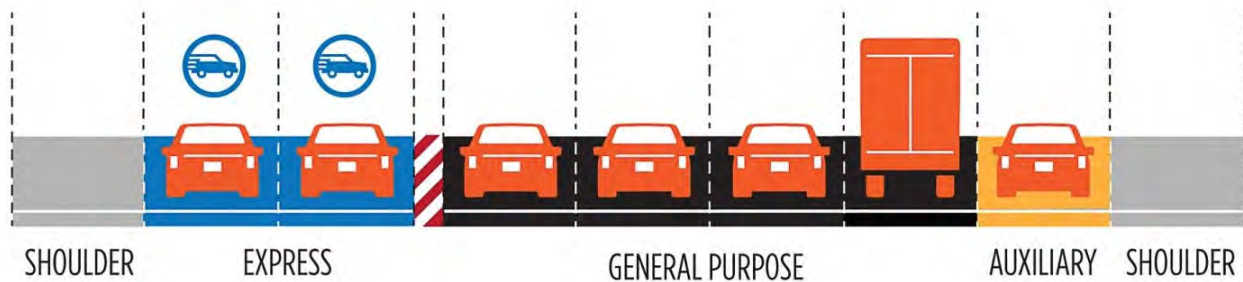
1.6.1.2 Alternative 2 – Build Alternative

Alternative 2, the Build Alternative, would include the following improvements to the identified portion of the I-15 Corridor:

- Two Express Lanes in each direction between SR-60 and SR-210;
- One Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 at the southerly end;
- One Express Lane in each direction between SR-210 and Duncan Canyon Road at the northerly end;
- One Auxiliary Lane in each direction between SR-60 and I-10; and
- One Auxiliary Lane in the NB direction between Fourth Street and Foothill Boulevard.

The Express Lanes would be separated from the GP lanes with a 2-foot-wide buffer with surface-mounted channelizers. (See **Figure 1-4** for Freeway Lane Configuration with Express Lanes)

Figure 1-4. Freeway Lane Configuration with Express Lanes



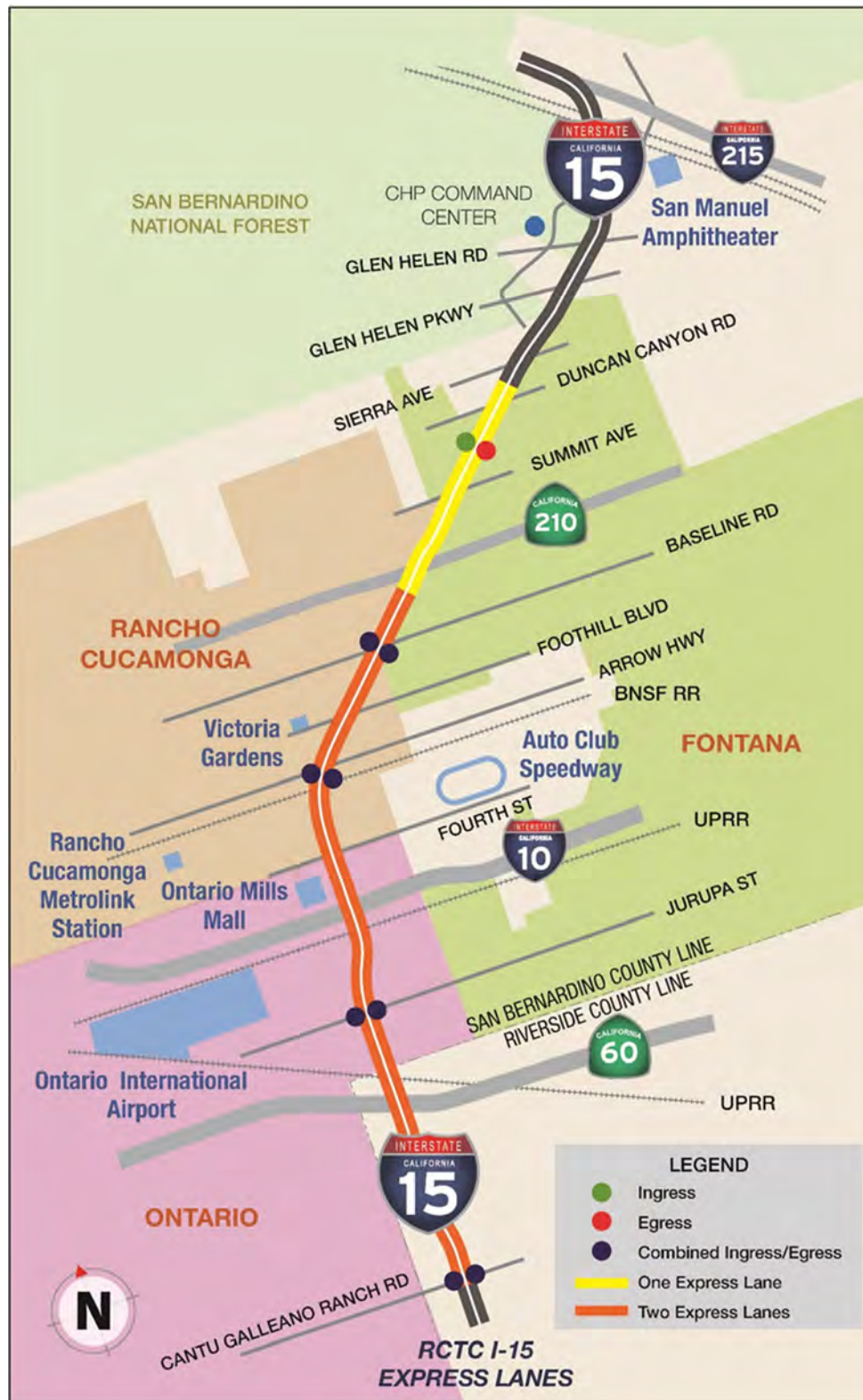
Express Lanes Access

The Express Lanes would have limited access that would be restricted to specific locations selected to meet ingress/egress (I/E) guidelines, per Caltrans' Traffic Operations Policy Directive (TOPD) 11-02, and to provide optimal access to existing interchanges. Intermediate access locations are proposed to allow traffic access to and from local street and system interchanges, and are anticipated to be generally co-located as combined I/E points every two to three miles in each direction. The identified access locations are listed in **Table 1-9**. **Figure 1-5** shows the location of the access points.

Table 1-9. Express Lane Access Points

Access Opening Location along I-15	Access Type	Northbound			Southbound			Interchange(s) Served
		Weaving Distance from on-ramp or to off-ramp		Opening Length (ft)	Weaving Distance from on-ramp or to off-ramp		Opening Length (ft)	
		(ft/lane change)			(ft/lane change)			
		Ingress	Egress		Ingress	Egress		
Cantu-Galleano Ranch Road	Combined Access/Egress without Weave Lane	>800	>800	2,060	>800	>800	2,000	Limonite Avenue, SR-60, and Jurupa Street
Jurupa Street	Combined Access/Egress with Weave Lane	>800	800	2,140	>800	>800	2,800	Cantu-Galleano Ranch Road, SR-60, I-10, and Fourth Street
Arrow Route	Combined Access/Egress with Weave Lane	770	>800	2,500	>800	>800	2,350	Jurupa Street, I-10, Fourth Street, Foothill Boulevard, and Baseline Road
Baseline Road	Combined Access/Egress without Weave Lane	>800	>800	2,700	>800	>800	2,200	Foothill Boulevard, SR-210, and Beech Avenue
Between Beech Avenue and Duncan Canyon Road	Ingress only (in the southbound direction) and Egress only (in the northbound direction)	N/A Egress Only	800	3,200	>800	N/A Ingress Only	4,550	Duncan Canyon Road and Sierra Avenue
Source: I-15 CP Traffic Study Report, March 2017.								

Figure 1-5. Location of Access and Egress Points



Source: I-15 CP Traffic Study Report, March 2017.

Ramp Reconstructions

The Build Alternative would include reconstructing the ramps at Jurupa Street interchange, I-10 interchange, Fourth Street interchange, and Foothill Boulevard interchange to accommodate the proposed improvements. Reconstruction of the ramps and the areas separating the ramps from freeway lanes (gore areas) is mainly due to the outside widening of the freeway. Major modifications to the locations of the ramp tie-in points along the freeway mainline are not required. High-Occupancy Vehicles (HOV) preferential lanes will be provided at Jurupa Street NB and SB On-Ramps, Foothill Boulevard NB and SB On-Ramps, and Fourth Street NB On-Ramp. These locations are within Caltrans right of way. In addition, the project proposes to add an additional GP lane on SB Foothill Boulevard loop entrance ramp to increase storage capacity at this location.

Structures

The proposed Build Alternative would also require widening of 12 undercrossing bridge structures, four railroad overhead bridge structures, and two freeway-to-freeway separation structures. The structures affected and the proposed improvements are summarized in **Table 1-10**.

A total of 21 retaining walls are proposed at the following locations: (See **Figure 1-6**, Alternative 2 (Build Alternative) for locations of retaining walls.)

- Along Jurupa Street NB on-ramp, SB on- and off-ramps
- Along the SB direction between Jurupa Street SB off-ramp and 10/15 interchange
- Along the NB direction between the E10-N15 Connector and Fourth Street interchange
- Fourth Street NB on-ramp and SB off-ramp
- Between Fourth Street interchange and Foothill Boulevard interchange, in the NB and SB directions
- Near the termini of Foothill Boulevard NB on-ramp, and at SB off-ramp and direct on- ramp
- On the SB direction between Foothill Boulevard interchange and the end of the outside widening work.

Right of Way

No additional right of way is anticipated for the construction of the project. Storm Water Best Management Practices (BMPs) to address storm water requirements and the treatment of surface-water runoff would also be within the existing right of way. Utility conflicts may potentially require Temporary Construction Easement (TCE) and/or utility easements. Locations identified at this time that would require work outside existing right of way limits, but within the project footprint, include the following:

- TCE and Permanent Easement are required at Arrow Route for the relocation of overhead electrical lines.
- TCE is needed in the area of Rochester OH for construction staging.
- TCE is required at East Mission Boulevard to realign UPRR Mission Boulevard Over Head and side track relocation.

Table 1-10. Structures Widening Within the Project Limits

Post Mile	Bridge Number	Bridge Name*	Southbound (Left)			Northbound (Right)		
			Rebuild/New	Outside Widening	Median Widening	Rebuild/New	Outside Widening	Median Widening
Riverside County								
51.26	56 0797	Cantu-Galleano Ranch Road OC	-	-	-	-	-	-
51.26	56 0693	Riverside Ave UC	-	-	X	-	-	X
51.45	56 0691	Route 15/60 Separation	-	-	X	-	-	X
51.95	56 0695	Mission Boulevard OH	-	-	X	-	-	X
52.27	06 0696	Philadelphia Street UC	-	-	-	-	-	-
San Bernardino County								
1.01	54 0971	Jurupa Street OC	-	-	-	-	-	-
2.05	54 0906	Airport Drive UC	-	X	-	-	X	-
2.05	54 0906G	Airport Drive UC (N15-E&W10 Conn)	-	-	-	-	-	-
2.15	54 0907	Vina Vista OH	-	X	-	-	X	-
2.37	59 0909	Route 15/10 Separation	-	X	X	-	X	X
2.56	54 0911	Ontario Mills Parkway UC	-	X	-	-	X	-
3.05	54 0912	Fourth Street UC	-	X	-	-		-
3.81	54 0918	Seventh Street UC	-	X	-	-	X	-
3.94	54 0986	MWD Pipeline UC	-	X	X	-	X	X
4.10	54 0919	Rochester OH	-	X	X	-	X	X
4.47	54 0920	Day Canyon Channel	-	X	X	-	X	X
4.61	54 0921	Arrow Route UC	-	X	X	-	X	X
5.28	54 0922	Route 15/66 Separation	-	X	X	-	X	X
5.97	54 0973	Etiwanda Avenue UC	-	-	X	-		X
6.71	54 0974	Baseline Road UC	-	-	X	-	-	X
7.08	54 0963	Etiwanda OH	-	-	X	-	-	X
7.44	54 0965	Victoria Street UC	-	-	X	-	-	X
7.56	54 0964	East Etiwanda Creek	-	-	X	-	-	X
8.11	54 0961	SR-210/I-15 Separation	-	-	-	-	-	-
8.75	54 0970	Cherry Avenue UC	-	-	X	-	-	X
9.55	54 0978	Beech/Summit Avenue OC	-	-	-	-	-	-
11.03	54 0980	Duncan Canyon Road OC	-	-	-	-	-	-
*Abbreviations: Conn: Connector, OC: Overcrossing, Sep: Separation, UC: Undercrossing, OH: Overhead, X- Indicates proposed structure improvements. Source: I-15 CP Draft Project Report, 2017.								

Future environmental review would be completed if other areas are used outside of the existing footprint. (See **Figure 1-6**, Alternative 2 (Build Alternative) for TCE and Utility Easement Locations.)

Utilities

Both underground and above-ground utilities are located within the project corridor. Based on as-built plans obtained from Caltrans and utility companies, utilities present within the project limits include overhead power lines, fiber optic lines, electrical and telephone lines and conduits, water and sewer pipelines, gas lines, fuel pipelines, and flood control channels. Determining positive location of utilities in the project vicinity that may be in close proximity or conflict with proposed improvements is an ongoing effort coordinated with the utility companies. The exact details of utility conflicts and relocation requirements would be determined during final design.

A major Metropolitan Water District (MWD) underground pipelines crossing is located at SBd Post Mile 3.94 parallel to the south side of the Metro link railroad tracks under Rochester Bridge. Structures at that location would require both inside and outside widening. Underground pipelines, which may be high-risk facilities, are often co-located within railroad right of way. Since most of the railroad overhead structures would require widening, positive location of underground facilities would be required. However, it is not anticipated that the project would affect the MWD facilities crossing the I-15 at the project area. The pipelines will not require relocation as a result of the project, and will be protected in place.

Power transmission towers adjacent to areas of outside widening are at a minimum distance of approximately 110 feet from existing right of way; hence, tower relocation would not be required. However, two transmission lines, owned by Southern California Edison (SCE), currently cross I-15 along Arrow Route. Placement of steel poles would be required to relocate the SCE overhead transmission line to avoid conflict with a proposed structure improvement. The project would protect in place a sewer line owned by Cucamonga Valley Water District (CVWD) and located under Day Creek Bridge, and Inland Empire Utilities Agency (IEUA) recycled water line and water line runs parallel to the proposed footing columns on East Avenue Bridge.

All other utility relocation work would be done within the existing right of way limits, or will be protected in place. Coordination with utility companies would continue during the final design and construction phases. The following utility owners have been identified as having utilities within the project limits:

- SCE
- Frontier Communications (Previously Verizon)
- CVWD
- Southern California Gas (SCG)
- Trans World Telecom (TWT)
- IEUA
- Kinder Morgan (KM)

- MCI WorldCom (MCI)
- MWD
- Wiltel Communications
- City of Fontana
- Rancho Cucamonga Municipal Utility

Storm Water

A total of 21 new Design Pollution Prevention Infiltration Areas are proposed for the project. Also proposed is the retrofitting of approximately 20 existing structural treatment devices, which is recommended to achieve post-construction treatment requirements for this project. All of the proposed BMPs are within the facility right of way limits. (See **Figure 1-6**, Alternative 2 [Build Alternative] for the location of these BMPs.)

Numerous drainage culverts and appurtenances are also located within the project limits. Several of these existing facilities may be affected and require replacement, though no major relocations are expected.

The project will incorporate the appropriate BMPs to treat Targeted Design Constituents to address potential impacts to groundwater and surface runoff. The project will incorporate National Pollutant Discharge Elimination System (NPDES) permit and storm water management plan (SWMP) requirements, and will obtain and incorporate requirements of Section 404 of the Clean Water Act (CWA) Nationwide Permit, Water Quality Certification under Section 401 of the CWA, and California Department of Fish and Wildlife (CDFW) 1602 Streambed Alteration Agreement. The project will coordinate with the San Bernardino County Flood Control District during final design and comply with requirements regarding impacts to agency facilities (See Section 2.2.2.3).

Aesthetic and Landscape Features

The project would retain as much existing vegetation as possible, particularly mature trees that are located between the highway and adjacent land uses. The project would apply a landscape treatment consistent with the existing landscaping in the corridor. Planting design would be provided during the final project design and consider safety, maintainability, and aesthetic compatibility with adjacent urban communities. Quantity, size, and location for replacement planting would be determined by the District Landscape Architect. Earthwork, including cuts and fills, would be contoured to visually blend with the surrounding landscape.

The landscape design would take into consideration that segments of the I-15 freeway are identified as Classified Landscaped Freeways per the criteria of the 2014 Edition of the State Outdoor Advertising Act and Regulations, Sections 2500-2513. Landscaping within classified freeway segments would be replaced if removed by the project. The quantity of replacement planting would be calculated to meet the requirements for continuous planting. Based on the criteria set in the 2014 Edition regulations, two segments of I-15 within the project area are included in the Caltrans list of Classified Landscaped Freeways published on October 24, 2016. Those segments are:

- Post Mile 5.27/5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue)
- Post Mile 7.56/10.11 (just south of the SR-210 and I-15 interchange, to north of the Summit Avenue overcrossing). However, no widening to the outside is occurring within these limits, and would not be affected by the project.

New bridge decking and structural columns would be constructed with the same concrete material and in the same light gray color as the existing I-15 roadway. In addition, the project would apply aesthetic treatment, like texturizing or scoring, to structures such as retaining walls, soundwalls, medians, or bridge abutments in the project area. Soffit lighting under the new bridge decking would be provided for pedestrian safety.

DGN FILE = C:\1-15-PAED\Exhibit 00-Keymap.dgn

BORDER LAST REVISED 7/2/2010

RELATIVE BORDER SCALE
15 IN INCHES

0 1 2 3

USERNAME => rodriguez
DGN FILE => Exhibit 00-Keymap.dgn

CU 00000

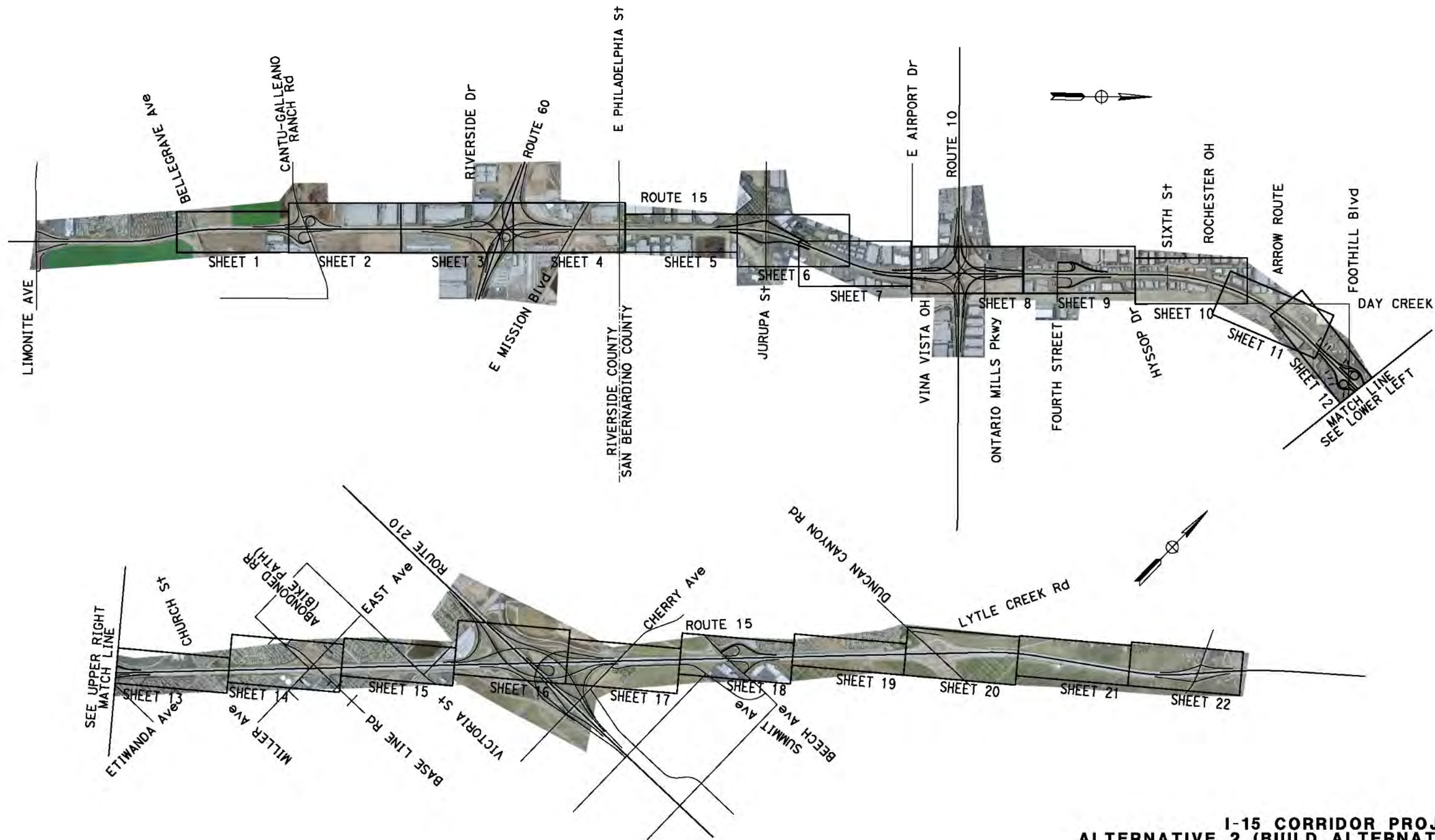
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE)

KEY MAP AND LINE INDEX

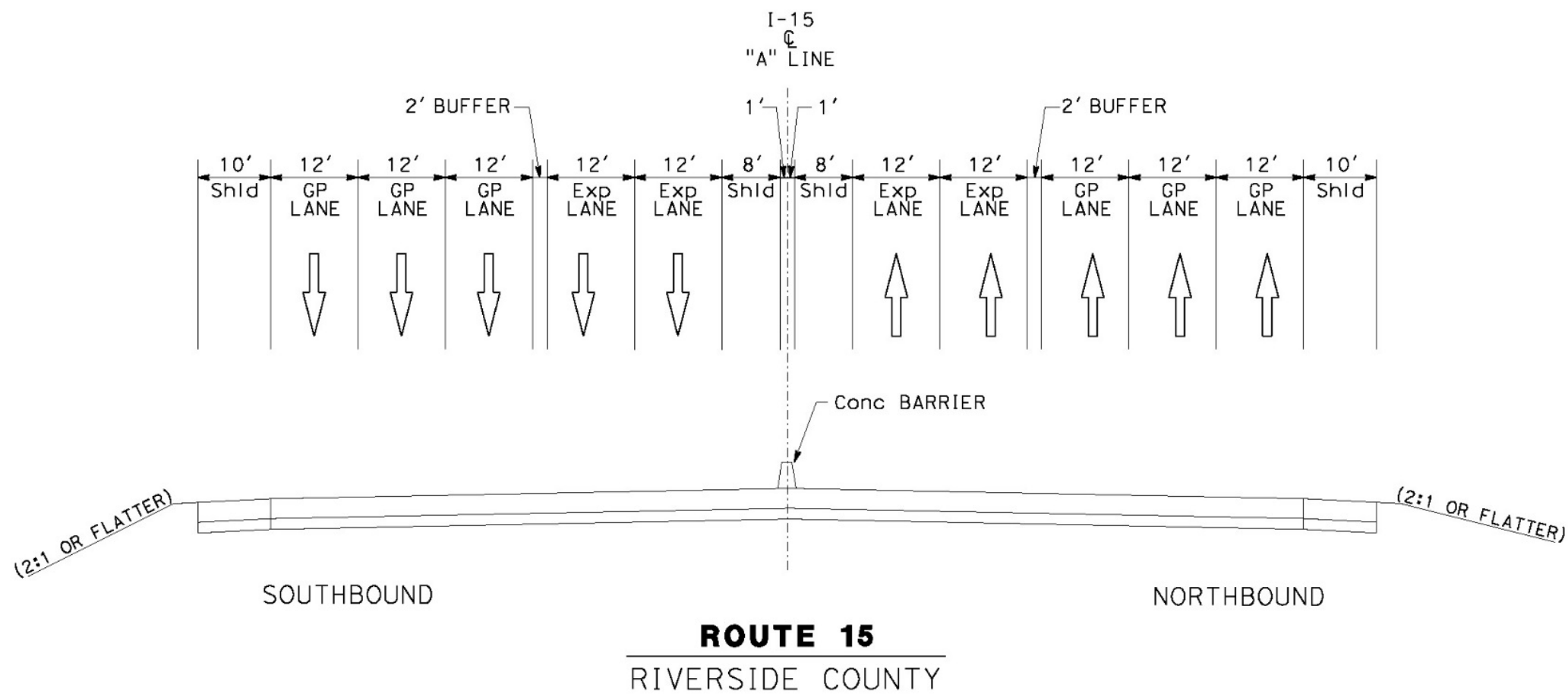
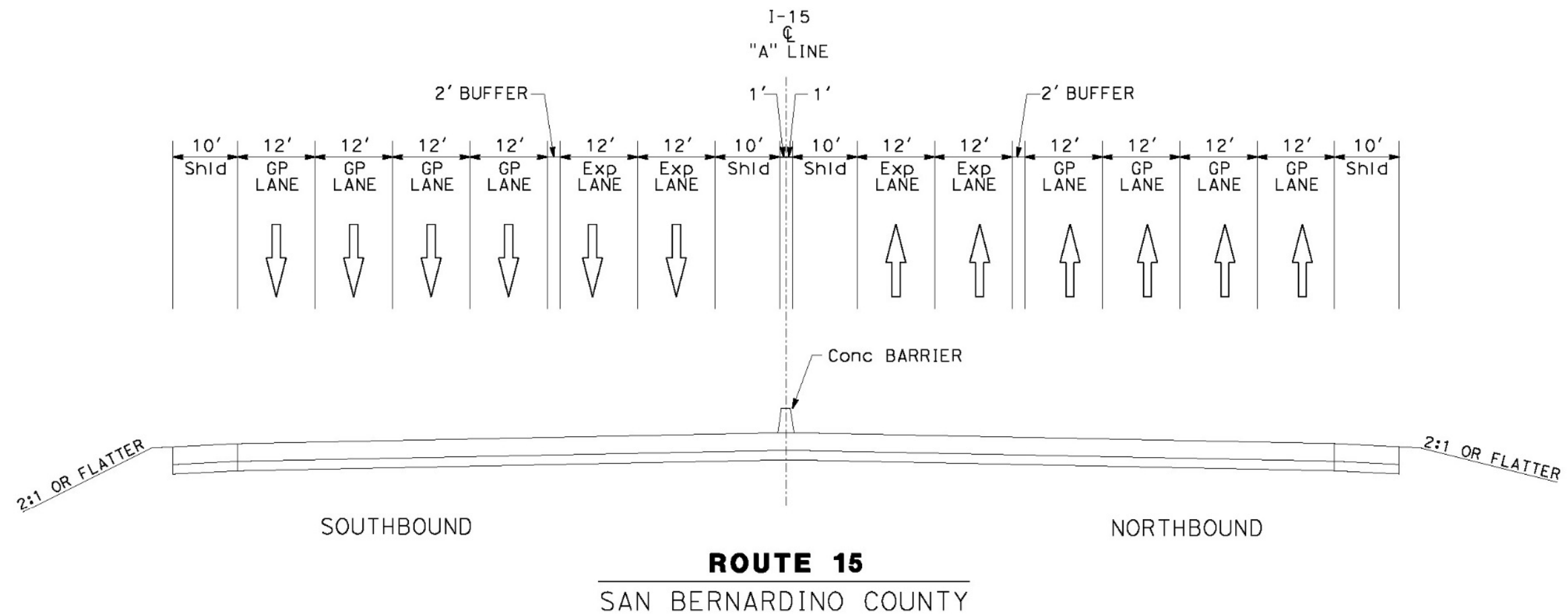
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Figure 1-6. Alternative 2 (Build Alternative) Page 1-27



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TIME PLOTTED => 17:23

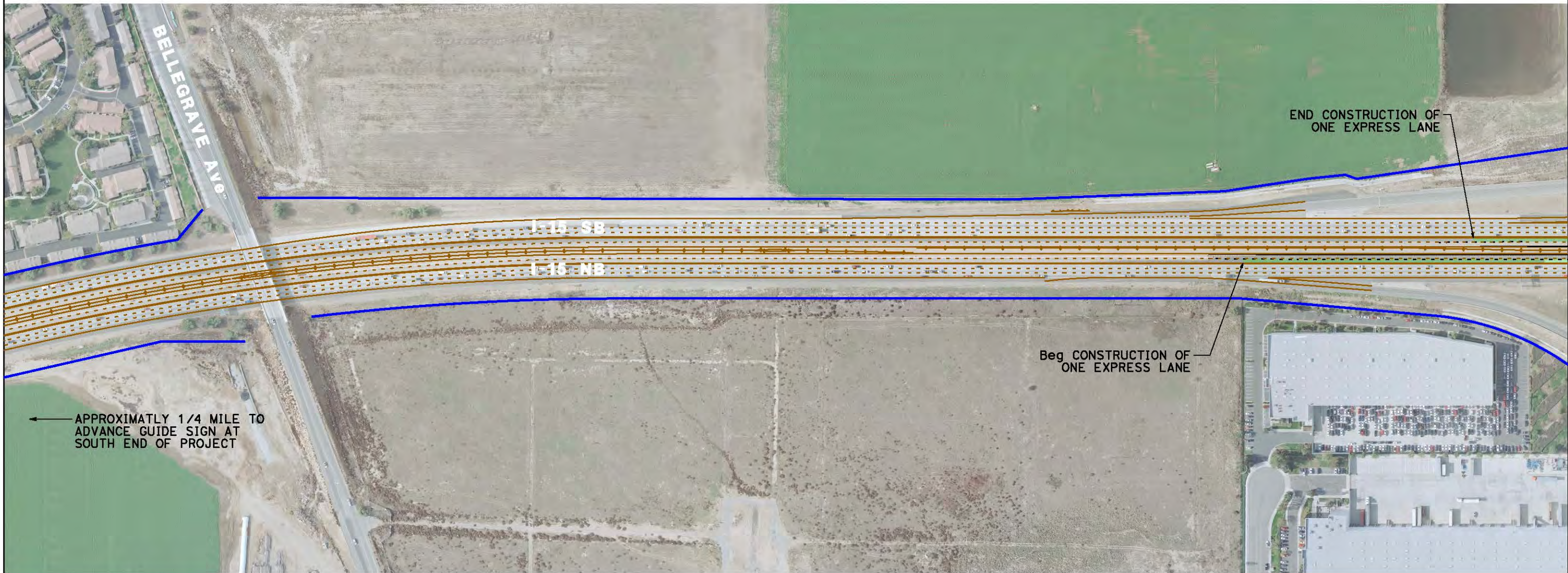
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2
(BUILD ALTERNATIVE)**

TYPICAL SECTIONS

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
- TFESA — Temp FENCE TYPE ESA
- FILL LIMIT
- CUT LIMIT

- PERMANENT EASEMENT (PE)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES
- RCTC I-15 TOLLED EXPRESS LANES PROJECT (EA 08-0J0800)

NOTE:

THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.

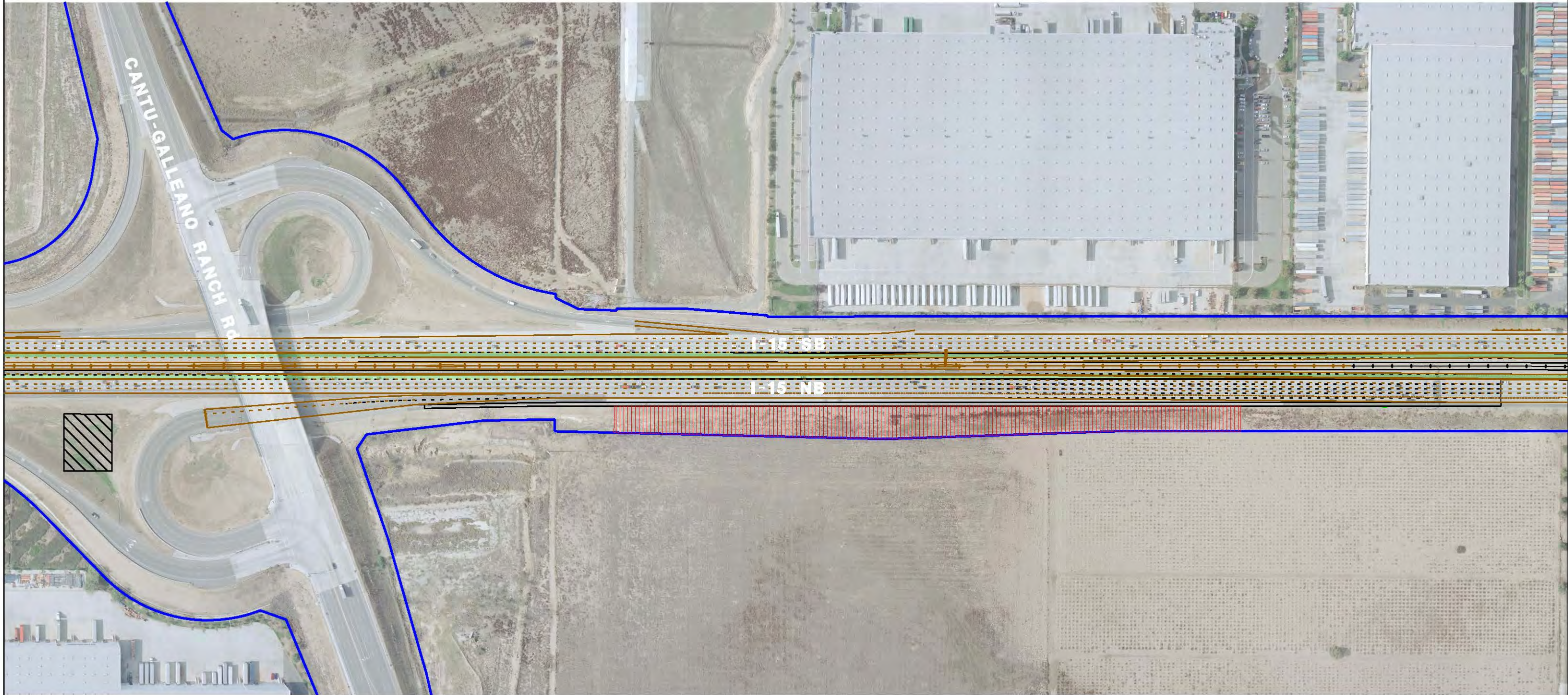


I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 1 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-31

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
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- CUT LIMIT

- PERMANENT EASEMENT (PE)
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- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES
- RCTC I-15 TOLLED EXPRESS LANES PROJECT
(EA 08-0J0800)

NOTE:

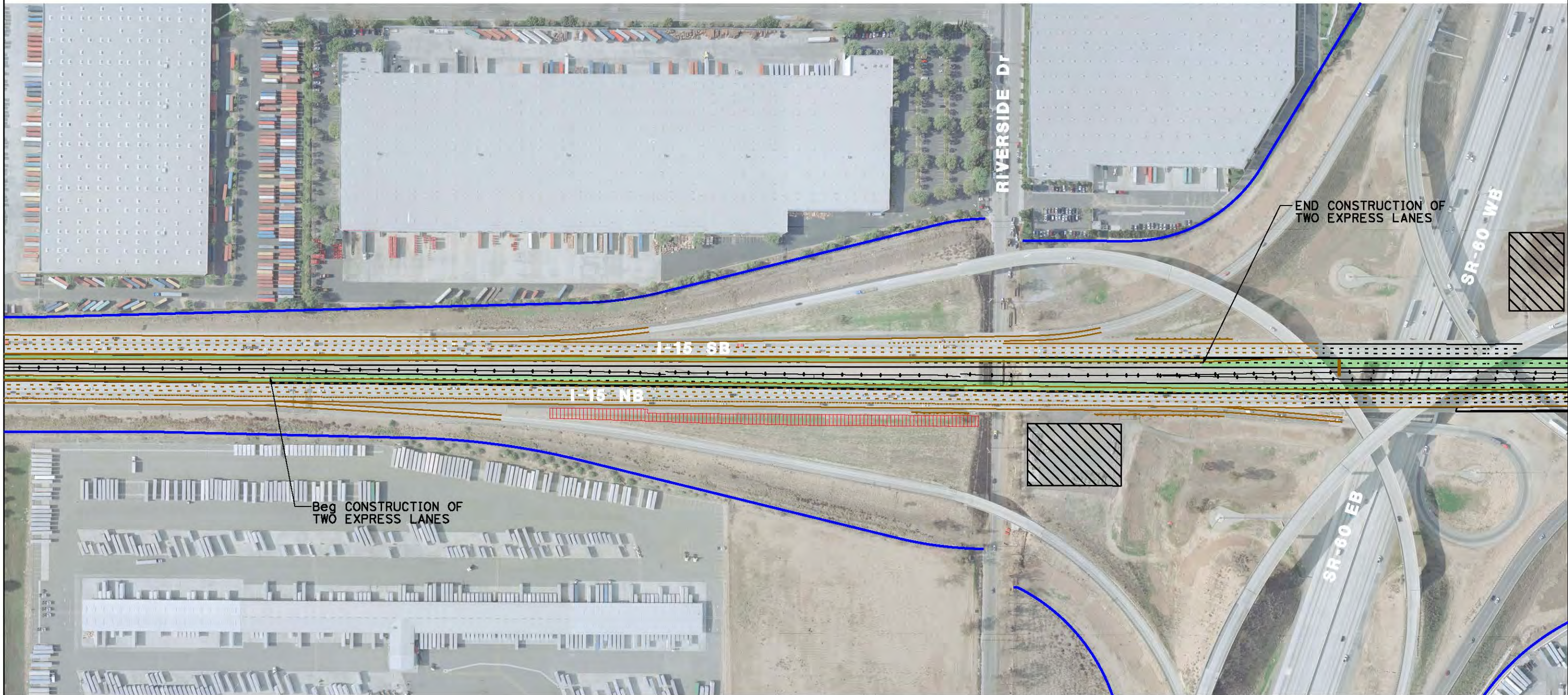
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 2 OF 22**

SCALE: 1"=250'

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
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- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES
- RCTC I-15 TOLLED EXPRESS LANES PROJECT (EA 08-0J0800)

NOTE:

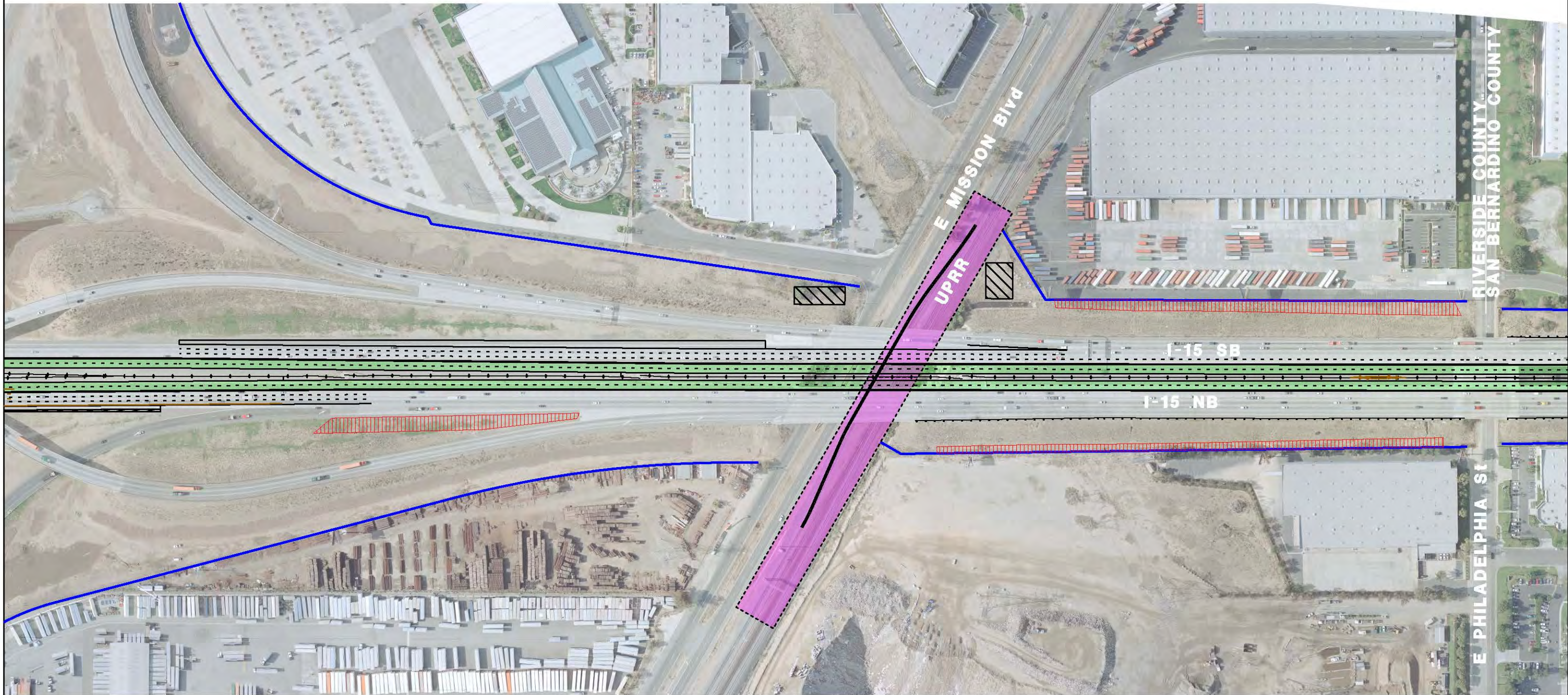
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 3 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-35

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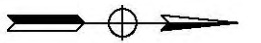


LEGEND:

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|------------------------------------|--|
| — ROADWAY IMPROVEMENTS | PERMANENT EASEMENT (PE) |
| - - - LANE RESTRIPING | TEMPORARY CONSTRUCTION EASEMENT (TCE) |
| — EXISTING STATE RIGHT OF WAY | POTENTIAL CONSTRUCTION STAGING AREA |
| — MEDIAN BARRIER | DESIGN POLLUTION PREVENTION INFILTRATION AREA |
| — RETAINING/
GROUND ANCHOR WALL | PROPOSED EXPRESS LANES |
| — PROPOSED SOUNDWALL | RCTC I-15 TOLLED EXPRESS LANES PROJECT
(EA 08-0J0800) |
| — MIDWEST GUARDRAIL SYSTEM | |
| — TFESA — Temp FENCE TYPE ESA | |
| — FILL LIMIT | |
| — CUT LIMIT | |

NOTE:

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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 4 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-37

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
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- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

NOTE:

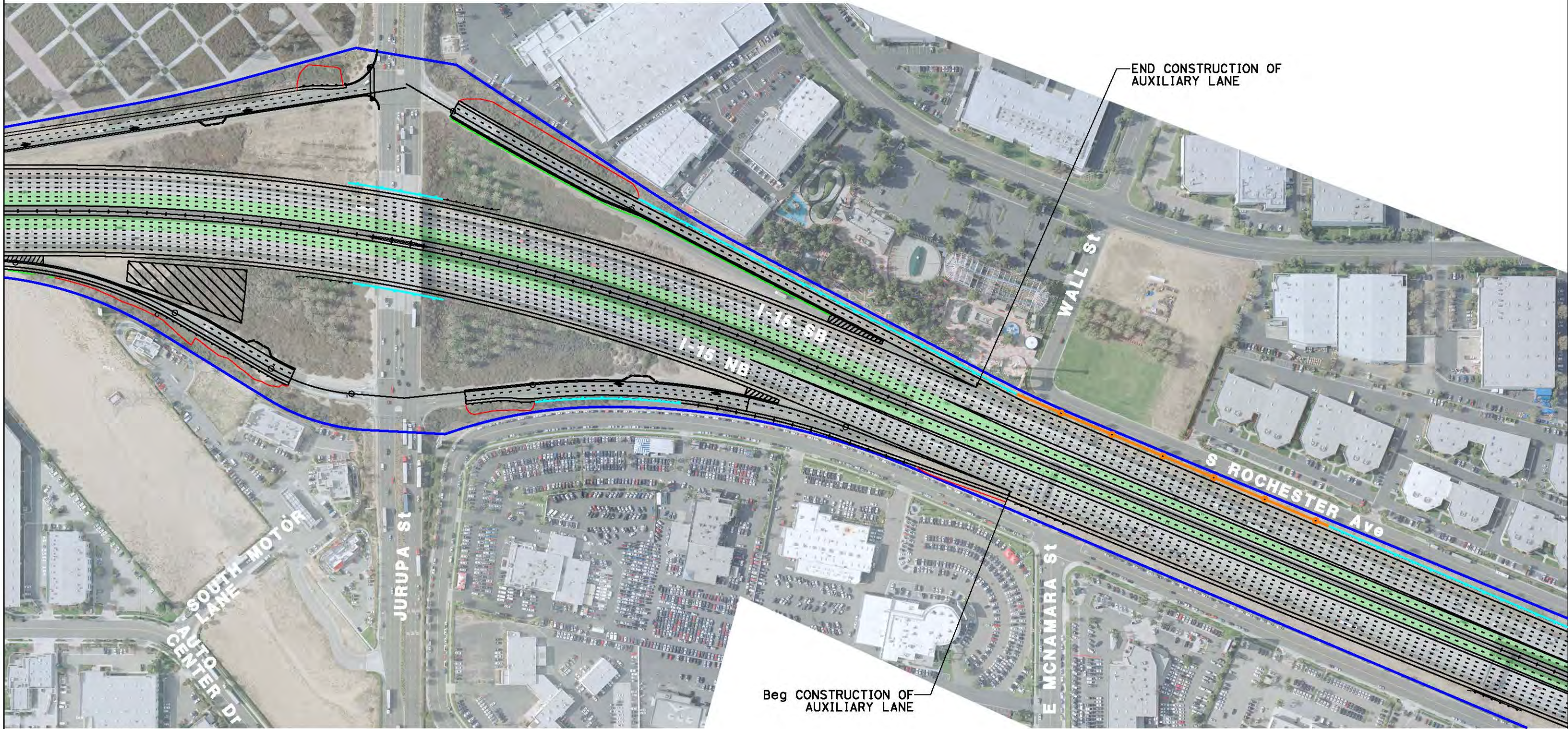
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 5 OF 22**

SCALE: 1"=250'

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/ GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
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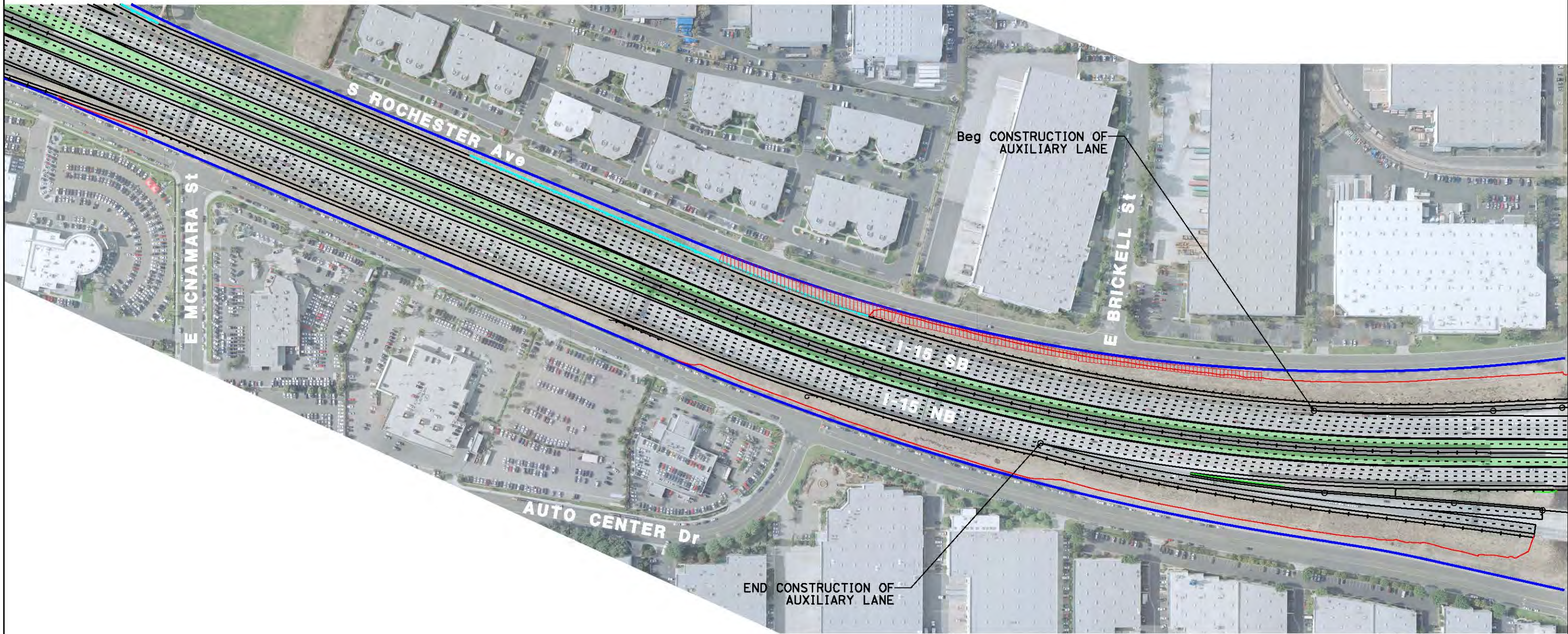


**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 6 OF 22**

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-41

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
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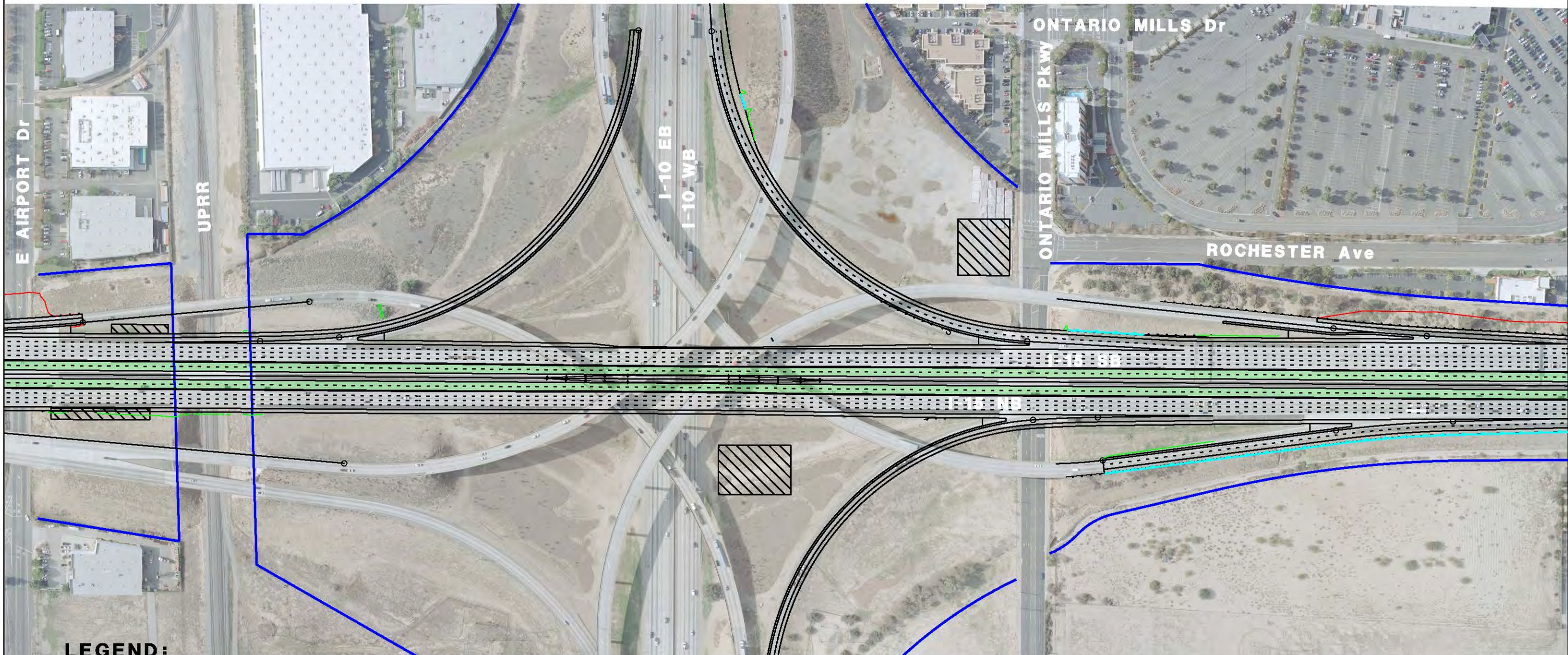


**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 7 OF 22**

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-43

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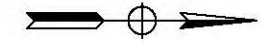


LEGEND:

- | | |
|---------------------------------|---|
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| - - - LANE RESTRIPING | TEMPORARY CONSTRUCTION EASEMENT (TCE) |
| — EXISTING STATE RIGHT OF WAY | POTENTIAL CONSTRUCTION STAGING AREA |
| — MEDIAN BARRIER | DESIGN POLLUTION PREVENTION INFILTRATION AREA |
| — RETAINING/ GROUND ANCHOR WALL | PROPOSED EXPRESS LANES |
| — PROPOSED SOUNDWALL | |
| — MIDWEST GUARDRAIL SYSTEM | |
| — TFESA — Temp FENCE TYPE ESA | |
| — FILL LIMIT | |
| — CUT LIMIT | |

NOTE:

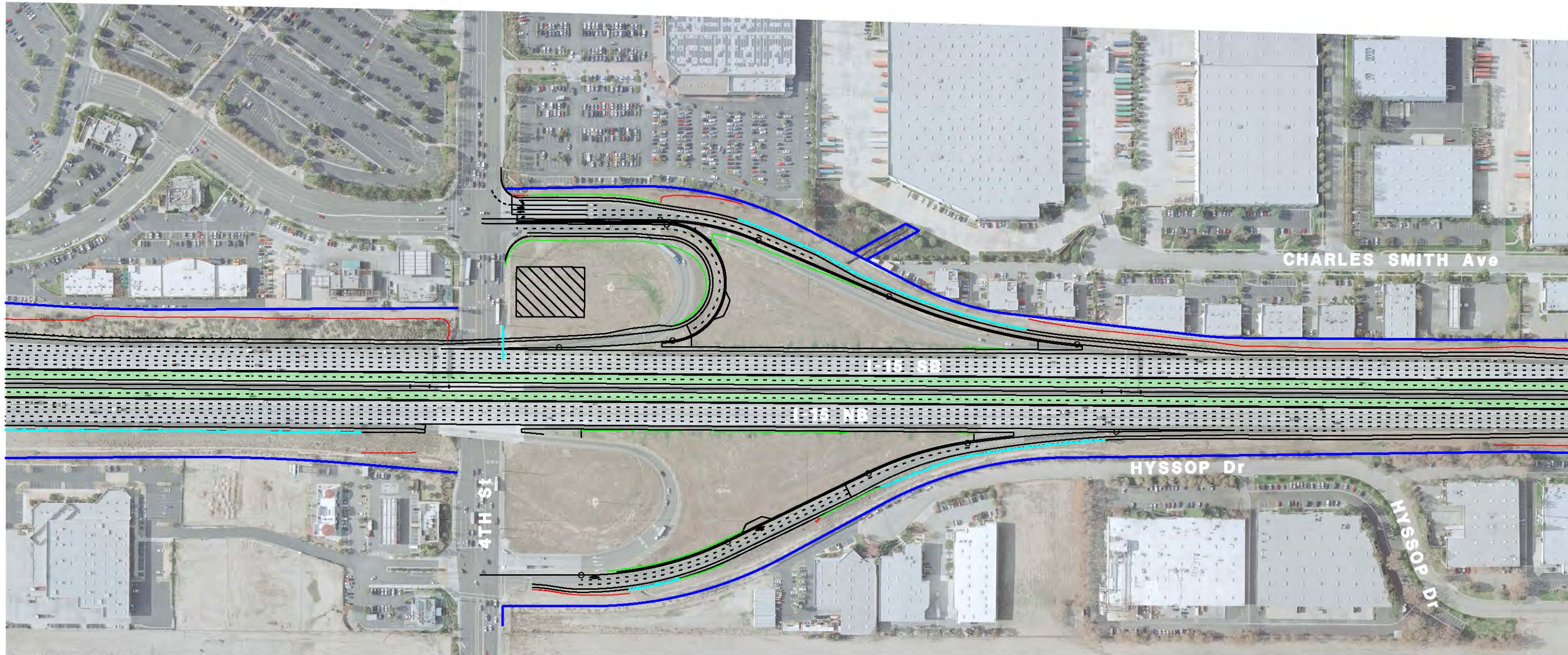
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 8 OF 22**

SCALE: 1"=250'

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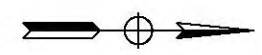


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| - - - LANE RESTRIPING | TEMPORARY CONSTRUCTION EASEMENT (TCE) |
| — EXISTING STATE RIGHT OF WAY | POTENTIAL CONSTRUCTION STAGING AREA |
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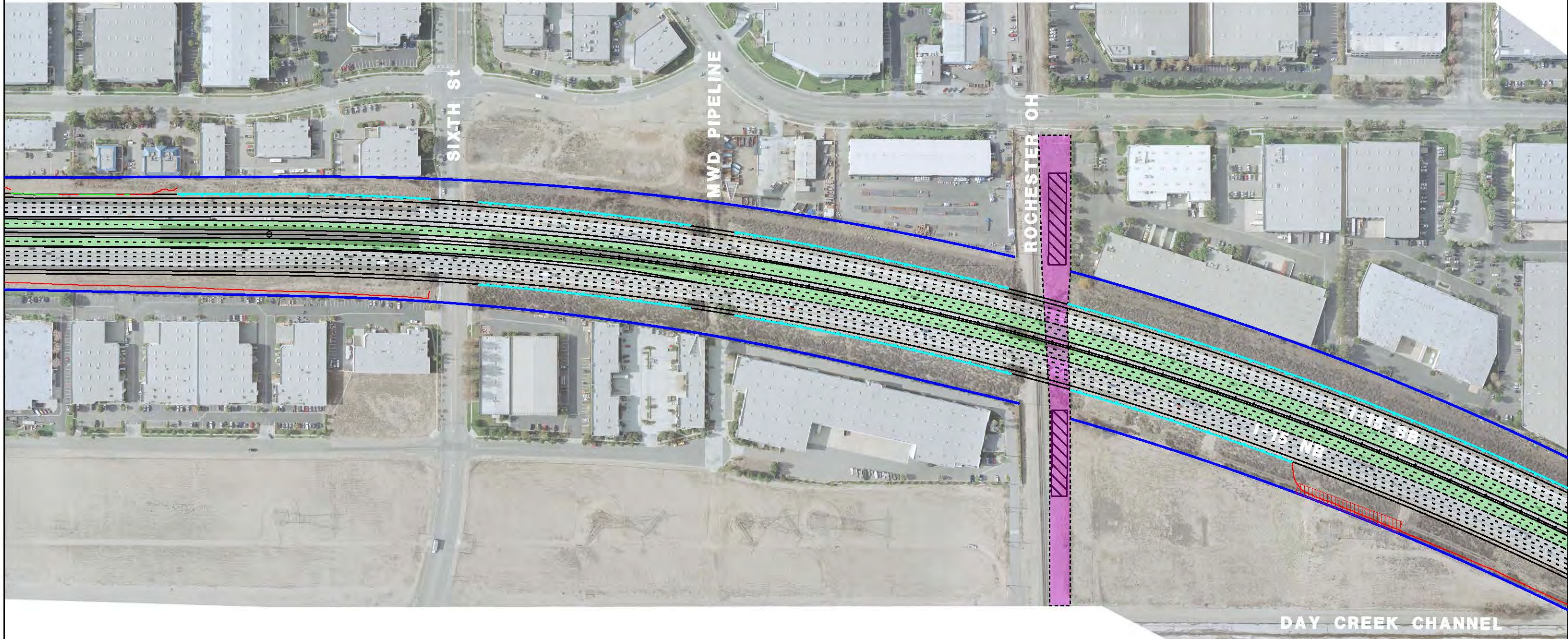
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 9 OF 22**

SCALE: 1"=250'

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
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**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 10 OF 22**

SCALE: 1"=250'

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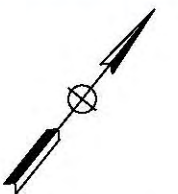
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 11 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-51

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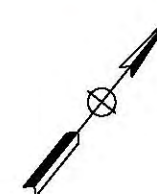
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 12 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-53

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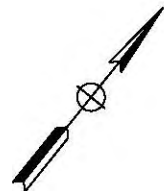
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- EXISTING STATE RIGHT OF WAY
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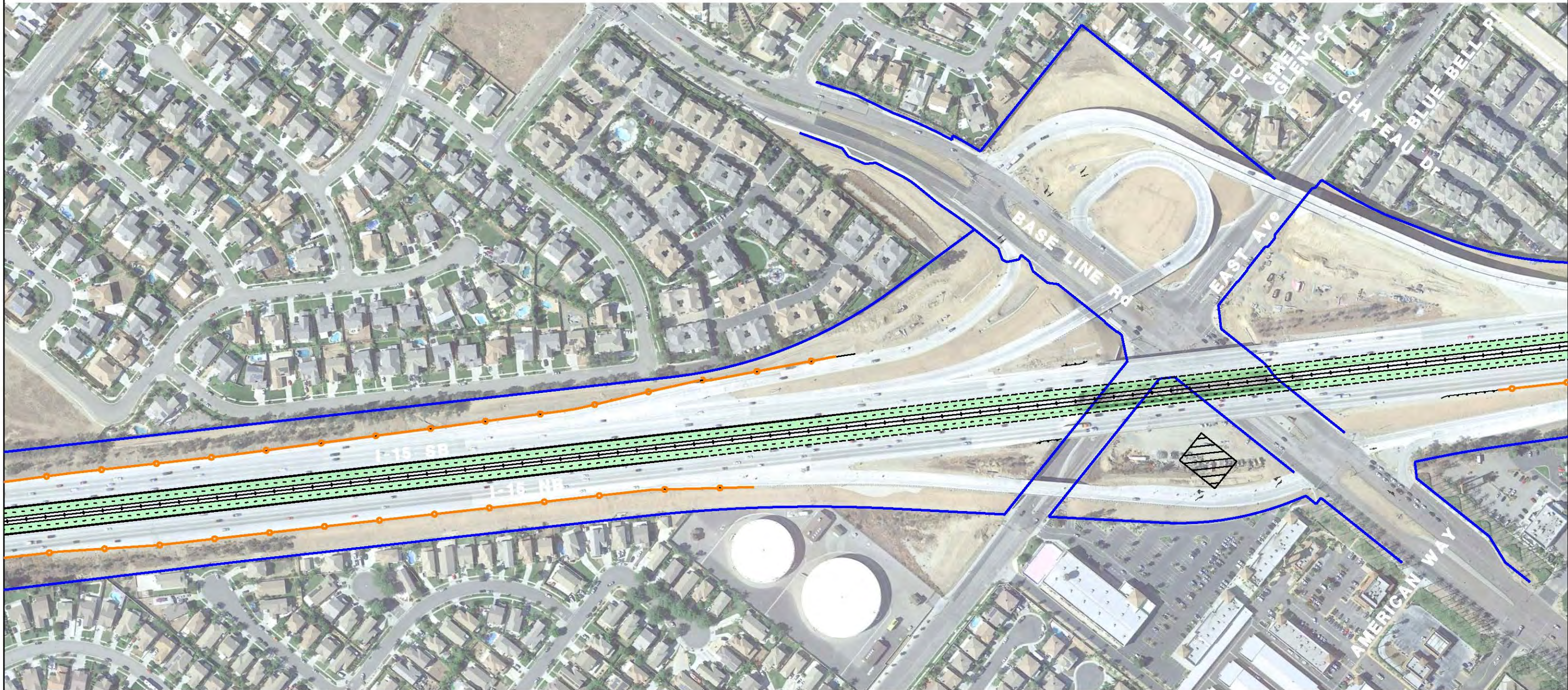


**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 13 OF 22**

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-55

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LEGEND:

- | | |
|------------------------------------|---|
| — ROADWAY IMPROVEMENTS | PERMANENT EASEMENT (PE) |
| - - - LANE RESTRIPING | TEMPORARY CONSTRUCTION EASEMENT (TCE) |
| — EXISTING STATE RIGHT OF WAY | POTENTIAL CONSTRUCTION STAGING AREA |
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| — MIDWEST GUARDRAIL SYSTEM | |
| — TFESA — Temp FENCE TYPE ESA | |
| — FILL LIMIT | |
| — CUT LIMIT | |

NOTE:

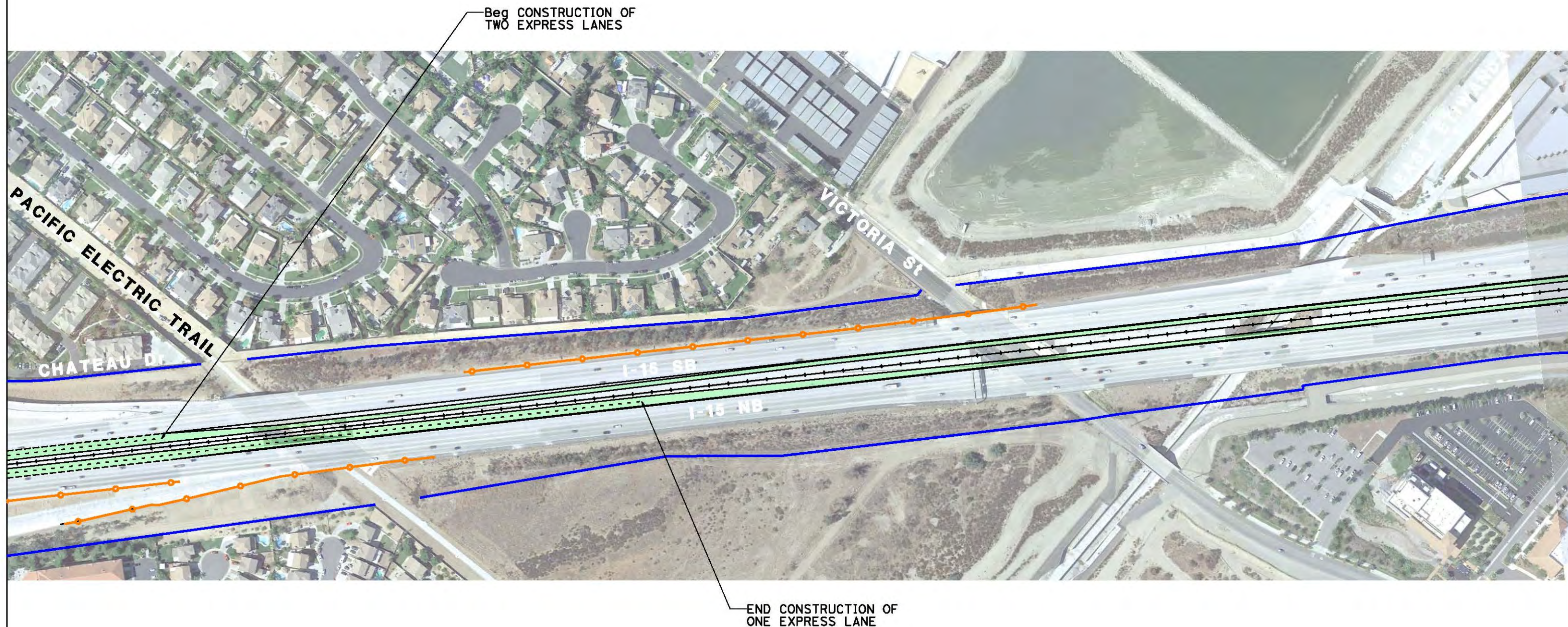
THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.



I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 14 OF 22

SCALE: 1"=250'

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/ GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 15 OF 22

SCALE: 1"=250'

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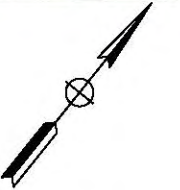
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- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/ GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
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- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

NOTE:

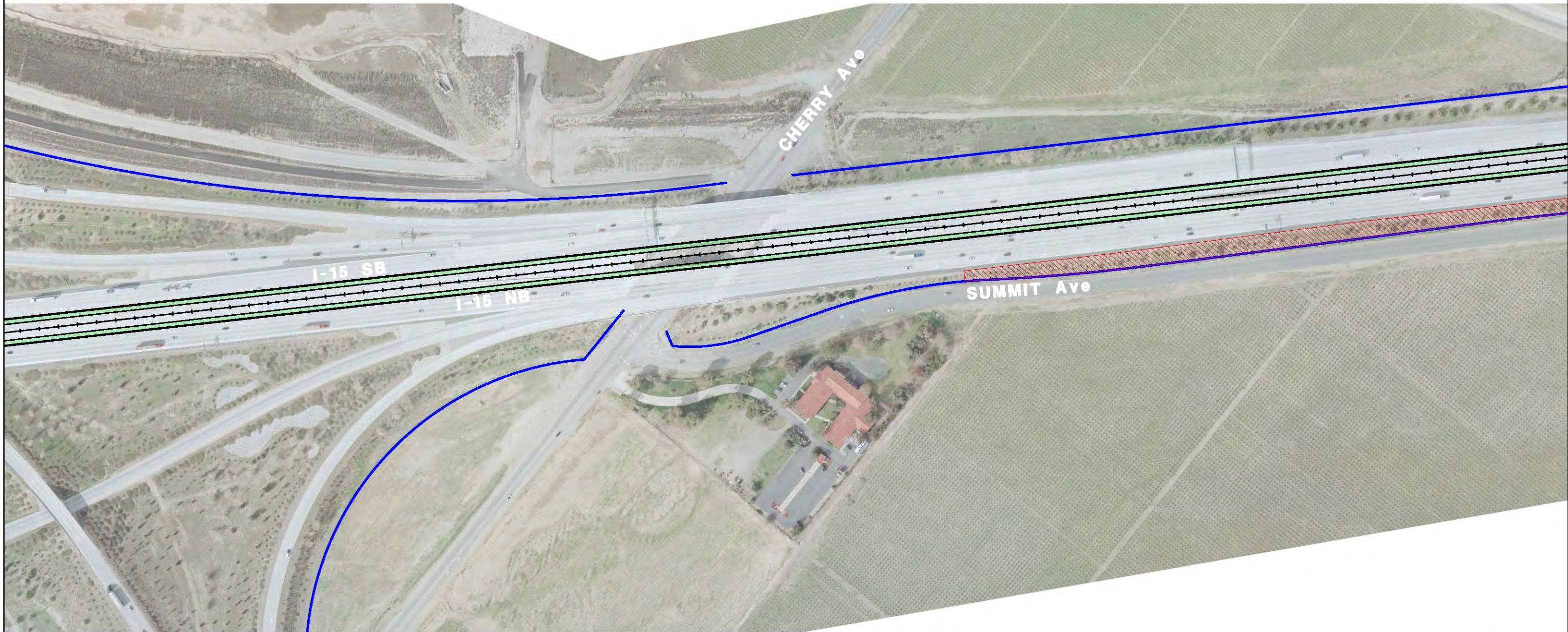
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I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 16 OF 22

SCALE: 1"=250'

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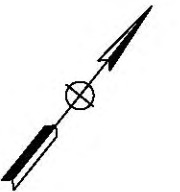
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- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
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GROUND ANCHOR WALL
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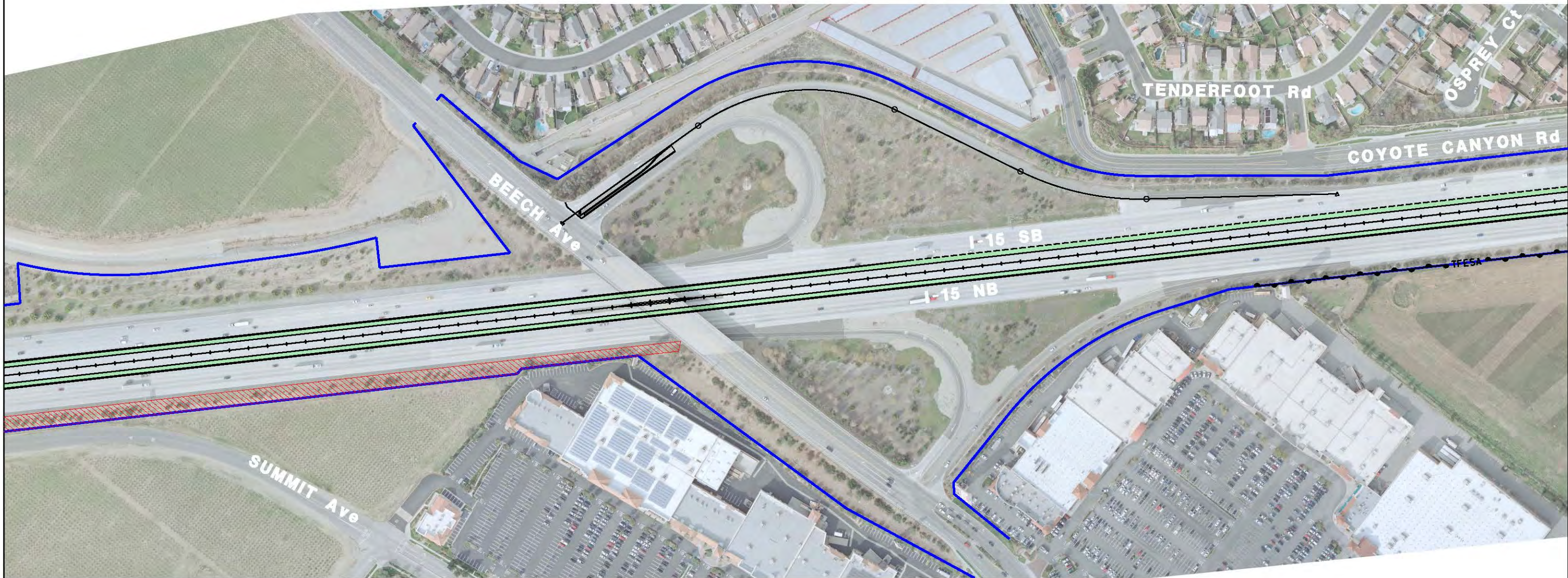


I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 17 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-63

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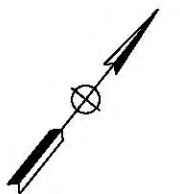
LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
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- PROPOSED EXPRESS LANES

NOTE:

THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.

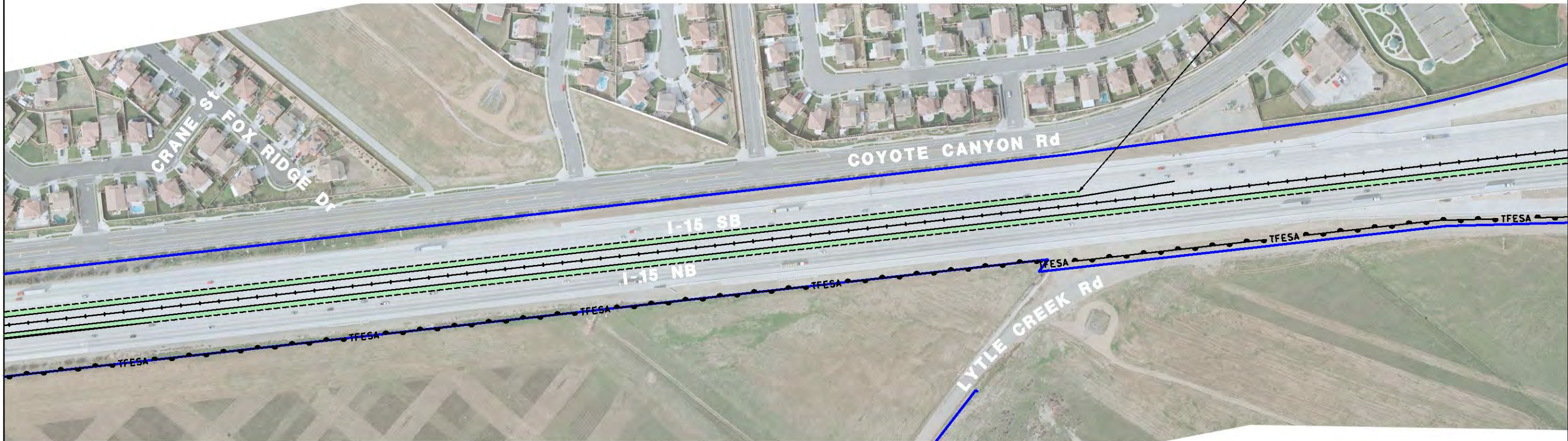


I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 18 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-65

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LEGEND:

- ROADWAY IMPROVEMENTS
- LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
- Temp FENCE TYPE ESA
- FILL LIMIT
- CUT LIMIT

- PERMANENT EASEMENT (PE)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

NOTE:

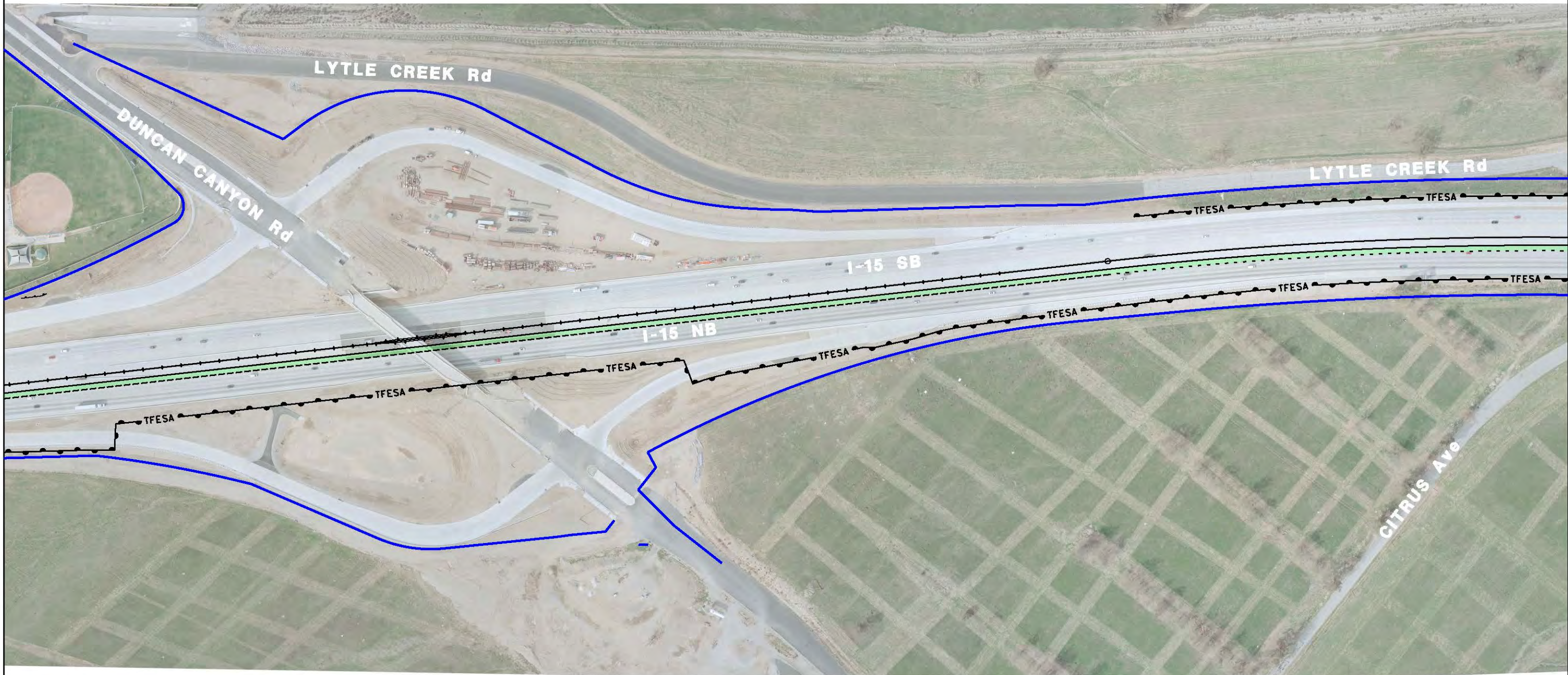
THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.



**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 19 OF 22**

SCALE: 1"=250'

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LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
- TFESA — Temp FENCE TYPE ESA
- FILL LIMIT
- CUT LIMIT

- PERMANENT EASEMENT (PE)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

NOTE:

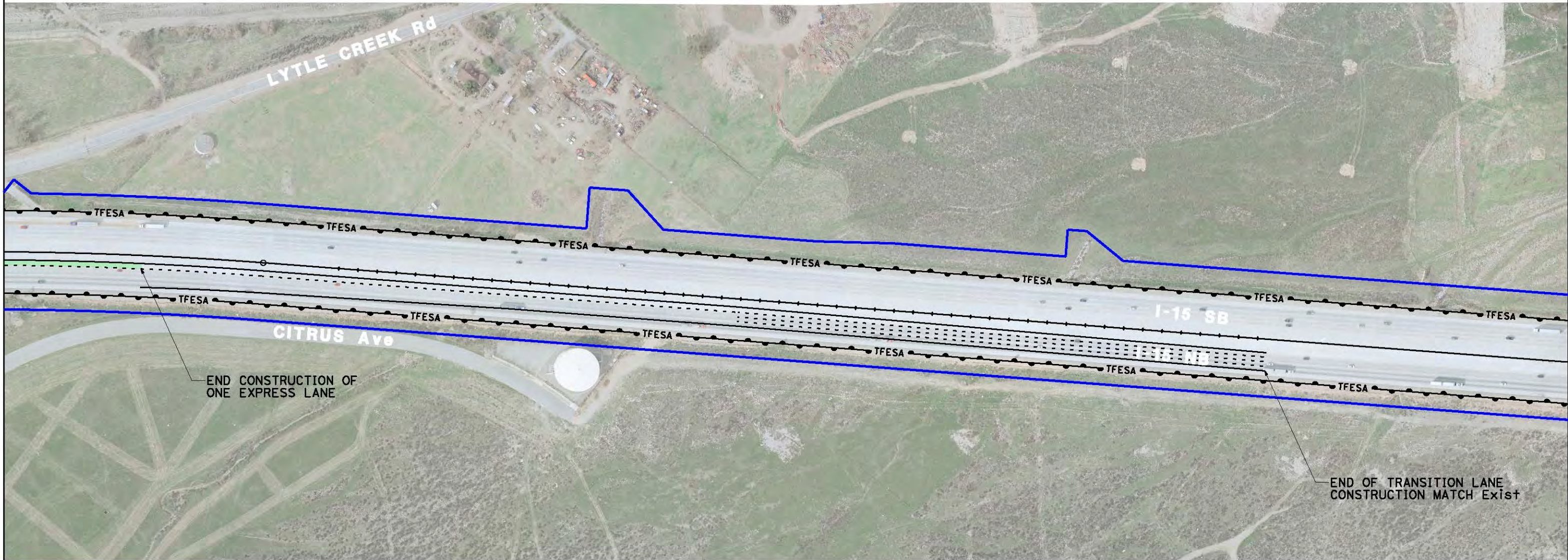
THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.

I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 20 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-69

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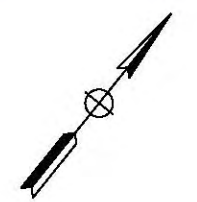


LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
- TFESA — Temp FENCE TYPE ESA
- FILL LIMIT
- CUT LIMIT

- PERMANENT EASEMENT (PE)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- POTENTIAL CONSTRUCTION STAGING AREA
- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

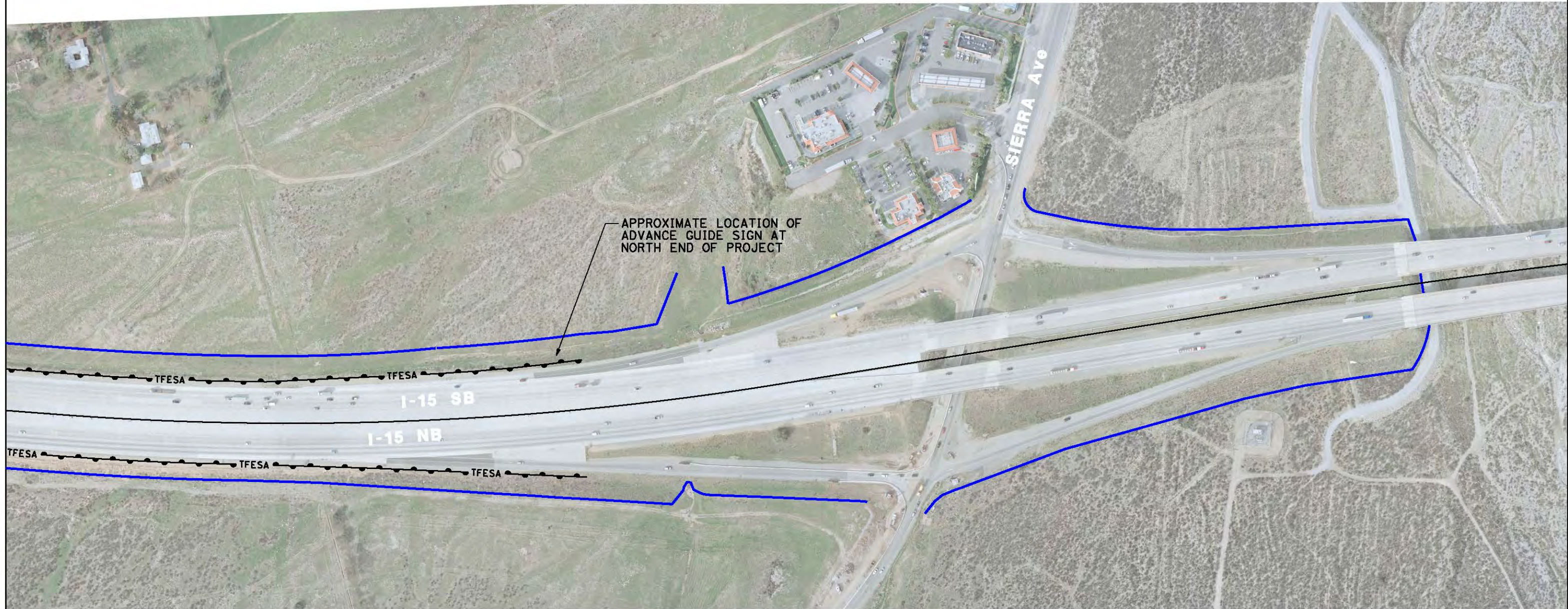
NOTE:
THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.



**I-15 CORRIDOR PROJECT
ALTERNATIVE 2 (BUILD ALTERNATIVE)
SHEET 21 OF 22**

SCALE: 1"=250'

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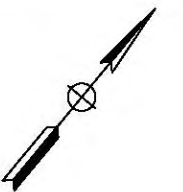
LEGEND:

- ROADWAY IMPROVEMENTS
- - - LANE RESTRIPING
- EXISTING STATE RIGHT OF WAY
- MEDIAN BARRIER
- RETAINING/
GROUND ANCHOR WALL
- PROPOSED SOUNDWALL
- MIDWEST GUARDRAIL SYSTEM
- TFESA — Temp FENCE TYPE ESA
- FILL LIMIT
- CUT LIMIT

- PERMANENT EASEMENT (PE)
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- DESIGN POLLUTION PREVENTION INFILTRATION AREA
- PROPOSED EXPRESS LANES

NOTE:

THE FENCING WILL BE INSTALLED AND EXACT PLACEMENT WILL BE DETERMINED IN THE FIELD WITH THE APPROVED DESIGNATED SBKR BIOLOGIST.



I-15 CORRIDOR PROJECT ALTERNATIVE 2 (BUILD ALTERNATIVE) SHEET 22 OF 22

SCALE: 1"=250'

Figure 1-6. Alternative 2 (Build Alternative) (continued) Page 1-73

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Noise Barriers

There are four noise barriers (soundwalls) planned with this project. Following is **Table 1-11**, which identifies the noise barrier number, and its location, height and approximate length. The soundwalls' locations are shown in **Figure 1-6**, Alternative 2 (Build Alternative).

Table 1-11. Soundwalls

Noise Barrier Number	Location	Height (ft)	Length (ft)
S-344	NB Mainline terminating on NB Baseline off-ramp, and at NB Foothill Blvd Loop on-ramp.	14	5,979 (5,349 feet along the mainline, and 630 feet along the on-ramp)
S-353	SB Baseline Off-Ramp Transitioning to SB Mainline, terminating south of Etiwanda Ave undercrossing	14	3,702
S-396	Along NB Mainline north of the Base Line Road overcrossing to the Gore Point with the NB Baseline On-Ramp, and along the northbound Baseline Avenue on-ramp transitioning to NB mainline, and terminating north of the Pacific Electric Trail overhead.	12	1,534 (635 feet along the mainline and 899 feet along on-ramp)
S-411	I-15 Mainline over the Victoria Street Overcrossing	14	1,498
Source: I-15 CP Noise Abatement Decision Report, July 2017.			

Railroads

There are three active and one abandoned railroad crossings along I-15 within the project limits, all of which involve overhead structures with the highway passing over the railroad. All of the crossings that would require structure widening are listed in **Table 1-12**. Coordination and agreements with the railroad companies would be carried out during the final design and construction phases.

Table 1-12. Railroad Crossings Within the Project Limits

Post Mile	Bridge Number	Railroad	Widen Structure
Riv 51.95	56 0695 (Mission OH)	Union Pacific	Yes
SBd 2.15	54 0907 (Vina Vista OH)	Union Pacific	Yes
SBd 4.10	54 0919 (Rochester OH)	BNSF	Yes
Source: Caltrans, As-Builts Plans			

Tolling Infrastructure

Vehicle Detection Stations

The tolls charged on the I-15 Express Lanes would be set dynamically based on real-time traffic conditions in both the Express Lanes and the parallel GP lanes. To provide the traffic and speed data needed for the dynamic pricing algorithm, vehicle detection stations, including toll gantries with transponder readers and high-speed digital cameras, would be installed approximately every mile along the corridor. The data gathered from these stations would be used to assess the levels of traffic volume, density of traffic, and speed in both the Express Lanes and the GP lanes. As traffic demand increases in the Express Lanes the toll algorithm would determine if a higher toll

rate is warranted. As speeds in the GP decrease, changes in travel time savings would be estimated and used to determine if the value of the increase in travel time savings can justify a toll rate increase. The system would be designed based on SBCTA specifications to maximize traffic usage, optimize toll revenues, or some combination of both. The operation of the I-15 Express Lanes is set based on maximum 1,650 vehicles per lane per hour (the threshold between LOS C and D) which would result in a minimum operating speed of around 45 mph.

Dynamic Message Signs

A Dynamic Message Sign (DMS) display with the current toll rate would be located at the approaches of entry points to the Express Lanes. At each Express Lane entry point, the DMS are expected to show current pricing for two destinations, subject to final design approval: one for travel to the end of the toll segment the driver is entering, and one for travel to the end of the system or the county line. These prices would be guaranteed, regardless of whether the tolls increase (as a result of increased levels of congestion in the express and general-purpose lanes) after the motorist enters the system. The DMS may also be used to display the minimum HOV eligibility requirement and applicable toll discount, particularly should the eligibility or rate discount be subject to change.

Tolling Policies

The I-10 and I-15 Express Lanes Concept of Operations Report is approved for I-10 Corridor Project and conceptually approved for this project and addresses various tolling policies under which the Express Lanes would be operated. This report provides preliminary information regarding the type of tolling, toll exemption or rate reduction for HOVs, maximum target volume to maintain speed and minimize congestion in the Express Lanes, method for determining toll amount, methods for toll collection and toll enforcement, penalty rates for toll violations, and provision of supplemental service patrol. The items listed below represent key policies which have been developed for the I-15 Express Lanes; however, they are subject to change pending further studies.

- The Express Lanes are anticipated to operate 24 hours a day, 365 days a year with a minimum toll rate.
- It is anticipated that HOVs with three or more occupants (HOV 3+) will be allowed to use the Express Lanes for a discounted rate, and SOVs and HOVs not meeting the occupancy requirement will be allowed to use the Express Lanes for a toll.
- Motorcycles, marked para-transit vehicles, emergency response vehicles, and other exempted vehicles are permitted in the Express Lanes by statute.
- Additional study will be conducted to determine whether Clean Air Vehicles will be considered toll-paying traffic required to pay a normal toll rate.
- Vehicles are anticipated to use switchable transponders or License Plate Recognition (LPR) for toll collection except that HOV 3+ must have a valid switchable transponder (declaring HOV 3+) to be eligible for the free or discounted travel.
- Tolls will be set dynamically based on real-time traffic levels in the Express Lanes to ensure peak period speeds of no less than 45 mph.
- To address equity concerns, SBCTA will create a Low-Income Equity Program. This program will include policies to enable low-income households to utilize the proposed

project improvements, such as waiving account maintenance fees, allowing the use of cash to open and replenish toll accounts, and/or implementing video license plate recognition as an alternative to toll collection technology. The Low-Income Equity Program will be created prior to construction and implemented in conjunction with the opening of the I-15 CP.

- Additional studies will be performed to establish the operating policies and business rules and determine pricing structures and toll violation rates.

Toll Operations and Maintenance

The institutional arrangements for operation and maintenance of the Express Lanes have not been determined and would be subject to a future agreement between Caltrans and SBCTA. Pending future agreements, it is anticipated that a toll authority would be established with responsibility for operations and maintenance of the Express Lanes, including incident management and maintenance of the tolling system.

Non-Motorized and Pedestrian Features

The project will replace the existing bike lanes and sidewalks that are affected with the construction of the project in kind. **Table 1-13** (Arterials with Bike and Pedestrian Facilities) lists all the arterials that may be affected by the construction of the project. The arterials are listed with their respective roadway classification, jurisdiction, and general roadway configuration. Existing curb ramps at ramp termini and other locations on arterials within the project area being improved would meet current Americans with Disabilities Act (ADA) standards.

Table 1-13. Arterials with Existing Bike and Pedestrian Facilities

Jurisdiction	Arterial	Roadway Classification	Thru Lanes	Continuous Sidewalk	Bike Lane
Jurupa Valley/ Eastvale	Mission Blvd	Other Principal Arterial	4	-	III
Ontario	Jurupa Street	Other Principal Arterial	6	EB	III
	Airport Drive	Minor Arterial	2	-	III
	Ontario Mills Pkwy	Minor Arterial	4	-	III
	Fourth Street	Other Principal Arterial	6	EB	III
Rancho Cucamonga	Sixth Street	Local	3	EB	III
	Arrow Route	Minor Arterial	3	EB/WB	III
	Foothill Blvd	Other Principal Arterial	6	EB/WB	II or III
	Church St/Miller Ave	Local	4	EB	III
	Etiwanda Ave	Other Principal Arterial	4	NB/SB	II
	East Ave	Minor Arterial	3	NB/SB	III
	Baseline Ave	Minor Arterial	5	EB/WB	III
Fontana	Victoria Street	Major Collector	2	-	II or III
	Cherry Ave	Minor Arterial	2	-	-

Note: “-” Indicates that there are no existing sidewalks and bike lanes and there is no designation for such according to local General Plans

As part of the TMP, coordination prior to the start of construction activities regarding street closures and recommended detours will also include pedestrian and bicycle facilities detours.

Transportation Management Plan (TMP)

Transportation Management Plan (TMP) is prepared for the project and subject to updates as design and construction plans of the project develop. The TMP includes measures to avoid and minimize temporary on the local communities and traffic flow due to construction activities. The TMP will include requirements to coordinate with local jurisdictions and public services providers regarding roadway closures and detours during construction, public information and public awareness campaign to educate and make local residence and motorists aware regarding construction activities and associated impacts. According to the TMP, all closures will be limited to nighttime or off-peak periods. Alternative routes will be provided for all temporary local streets closures. Detour routes will avoid routing traffic through local streets in communities adjacent to the closures to the extent possible. The TMP elements may include, but are not limited to, the following elements:

- a. Public information/public awareness campaign (PAC) to educate motorists, merchants, residents, elected officials, and governmental agencies about construction activities and associated impacts, including road closures, noise, dust, and other construction-related activities, and the effect on I-15 corridor travel. PAC components include scheduled public meetings, brochures and mailers, press releases/media alerts, and updates on the project website.
- b. Community task force that includes stakeholders (such as businesses, neighborhood groups, interested individuals, public officials, and service providers) that may be affected by work zones to meet on regular bases to receive updates on construction activities and timelines.
- c. Construction team workshops to share updates and coordinate closures/detours with special events or other potential construction conflicts.
- d. Motorist information system during construction that enables the motorists to make informed decisions about travel plans. The system includes permanent or fixed Changeable Message Signs (CMSs), Portable Changeable Message Signs (PCMs), ground-mounted signs, Caltrans Highway Information Network (CHIN), 511 Travel Information System to provide real-time traffic information to motorists approaching the construction zone, and a lane closure website with information about the location and duration of closures.
- e. Incident management system, which includes the establishment of Construction Zone Enhanced Enforcement Program (COZEEP) and utilization of CHP to enforce closures, aid disabled motorists, and provide a presence to maintain the integrity of the work area. Freeway service patrol would be utilized to patrol and assist motorists with car trouble to keep traffic moving and reduce chances of secondary accidents.
- f. Construction staging to help minimize delays and congestion associated with construction activities. As part of construction plans, lane modifications would be implemented to maintain the existing number of highway lanes and a lane width of 11 feet.

Other Project Provisions

This 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 impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

- Comply with the standard provisions regarding the California Health and Safety Code (H&SC) Section 7050.5 dealing with the discovery of unanticipated cultural materials and human remains. (See Section 2.1.11.3.)
- Prepare and implement a plan for Management of Asbestos Containing Materials in Bridges, incorporate measures for handling lead based material according to Standard Special Provision (SSP) 14-11.16 (2015 Edition). Also, prepare and implement a soil management plan to address the arsenic-contaminated area beneath the Etiwanda OH. (See Section 2.2.5.3.)
- Written notification regarding work performed during activities (i.e., drilling, cutting, sanding, scraping) that disturb the asbestos-containing materials would be made to the South Coast Air Quality Management District (SCAQMD), in accordance with SCAQMD Rule 1403, and to Cal/OSHA in accordance with 8 CCR 1529. (See Section 2.2.5.3)
- Yellow striping paint that must be removed at these locations would be handled and managed in accordance with CCR 1532.2.
- All right of way related activities will be performed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as Amended.
- Comply with SSP 14-8.02 (2015 Edition) and other standard practices to monitor noise impacts during construction. (see Section 2.2.7.3)
- Comply with Standard Specification 14-9.02 (2015 Edition), and other standard practices according to the Air Resources Board and South Coast Air Quality Management District (SCAQMD) requirements for air quality restrictions such as reducing idling time, proper maintenance of equipment, and fugitive dust control during the construction period.
- The proposed project would require authorization under Section 404 of CWA Nationwide Permit, Water Quality Certification under Section 401 of the CWA (and a WDR permit for impacts on state waters only), and CDFW 1602 Streambed Alteration Agreement. (Section 2.2.2.3)
- All excavation would be performed in accordance with project plans, specifications, all Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health of California (Cal-OSHA) requirements, and the current edition of the California Construction Safety Orders. (Section 2.2.3.3)
- Existing culverts and pipes to be abandoned would be abandoned in accordance with Section 15-2.05C (Standard Special Provisions, 2015) and encountered voids at culverts would be repaired in accordance with Section 15-6.02 (Standard Special Provisions) of the Caltrans Standard Specifications (2015 Edition).

- New culverts and drain pipes would be embedded in sand in accordance with Section 19-3.02E (2); or in accordance with Section 19-3.02G of the Caltrans Standard Specifications (2015 Edition).
- Construction equipment fleets will be in compliance with Best Available Control Technology requirements.
- All vehicles and equipment will meet appropriate model year EPA/NHTSA/CARB standards related to fuel efficiency and emissions.
- All engines or portable engine-driven equipment required to obtain permits will obtain either a CARB Portable Equipment Registration or a permit from SCAQMD.
- Comply with sound control provisions as included in Standard Specification 14-8.02 (2015 Edition), which requires the contractor not to exceed 86 dBA at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. Internal combustion engines shall be equipped with the manufacturer-recommended muffler. Internal combustion engines shall not be operated on the job site without the appropriate muffler.
- Follow Standard Specification 13-4.03E (4) (2015 Edition) regarding location for activities that involve equipment maintenance, staging, and dispensing of toxic material. Such activities will occur in developed or other designated non-sensitive upland areas, so that runoff from spills is not allowed to enter any waters.
- Follow Standard Specification 7-1.02M (2) (2015 Edition) to provide fire suppression capabilities, especially during fire seasons.
- Follow Standard Specifications Sections 13-05 and 21 (2015 Edition) related to erosion control during construction. Measures include fiber rolls, silt fencing, soil binders, rock slope protection, revegetation with erosion control seed mix, and the use of 4:1 slopes or flatter.
- Install highly visible barriers around natural communities adjacent to the limits of disturbance.
- In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, none of the species on the California list of invasive species would be used during the project for erosion control or landscaping.
- Conduct pre-construction surveys required for all protected species and biological resources as identified in Section 2.3, Biological Environment.

Roadway Design Deficiencies

Some of the existing non-standard geometric features would be eliminated or improved by the proposed project. The improvements include the following existing non-standard features:

- Superelevation rate along horizontal curves on interchange ramps
- Curvature along horizontal curves on interchange ramps
- HOV preferential lanes on local interchange entrance ramps
- Ramp metering along local interchange entrance ramps

- California Highway Patrol (CHP) Enforcement Areas on entrance ramps
- Standard grades along local interchange ramp alignment
- ADA curb ramps at curb returns
- Standard ramp alignment geometry

Design Exceptions

Due to right of way and other existing physical constraints, several mandatory and advisory design exceptions have been identified at various locations of the project corridor. Design features or elements that deviate from mandatory standards require approval from the Caltrans Division of Design Chief. Approval of deviation from advisory standards is delegated to the District Directors. Additional design exceptions may be identified during the final design phase of the project. Some of the identified design exceptions include the following features:

Mandatory Design Exceptions:

- Reduced Superelevation Transition Rate and Distance
- Reduced Shoulder Width
- Reduced Sight Distance at Horizontal Curves
- Reduced Sight Distance at Vertical Curves
- Reduced Lane Width
- Reduced Weaving Distance
- Reduced Median Standards
- Reduced Vertical Clearance
- Reduced Curvature Standards

Advisory Design Exceptions:

- Non-Standard Superelevation Transition
- Reduced Vertical Curve length
- 2:1 Side Slopes
- Reduced Median Width
- Reduced Vertical Clearance
- Reduced Distance of Lane Drop Taper at Metered Multilane Ramps
- Reduced Distance between Successive On-Ramps
- Reduced Freeway-to-Freeway Connections Design Speed
- Reduced Number of Freeway-to-Freeway Lane Connection

Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives

Transportation Demand Management (TDM) focuses on means of reducing the number of vehicle trips and vehicle miles traveled, and increasing vehicle occupancy. Typical activities would be to promote ride sharing programs. SBCTA operates and maintains a countywide vanpool program as an alternative mode of transportation for residents commuting within San Bernardino County. SBCTA and the VVTA partnered to develop and administer the San Bernardino Regional Vanpool Program-Victor Valley Phase beginning September 2012. SBCTA is currently working in partnership with Omnitrans and RCTC to expand the program countywide and extend it into Riverside County. Daily commuter ridesharing information can be accessed by motorists using the newly created IE511 website (www.IE511.org). SBCTA also supports ridesharing by establishing a park-and-ride facilities lease program, which reimburses businesses for the use of their parking spaces as park-and-ride lots. There are several park-and-ride facilities along the I-15 corridor, one of which is within the project limits, located at 13850 Victoria Street in the city of Fontana. In addition, vehicles with three or more occupants may be allowed to use the Express Lanes at a discounted toll rate.

Transportation System Management (TSM) strategies implement actions that improve the capacity of a facility without increasing the number of through lanes. Examples of these strategies are ramp metering and auxiliary lanes, and providing options for mass transit and ridesharing.

Although TSM measures alone could not satisfy the purpose and need of the project, the following TSM measures have been incorporated into the Build Alternative for this project:

- Provide HOV lanes at Jurupa Street on-ramps in the NB and SB directions, Fourth Street on-ramp in the NB direction, and Foothill Boulevard on-ramp in the SB direction.
- Construct one Auxiliary Lane in each direction between SR-60 and I-10.
- Construct one Auxiliary Lane in NB direction between Fourth Street and Foothill Boulevard.
- Incorporate new ramp metering locations include at the Foothill Boulevard NB loop on-ramp and direct on-ramp.
- Incorporate Intelligent Transportation System (ITS) elements, including closed-circuit television (CCTV) systems for viewing ramps and nearby arterials; CMS and other signs to improve traveler information system; and vehicle detection systems (VDS) for volume, speed, and vehicle classification.
- At locations of interchange improvements, upgraded traffic signals would be interconnected and/or coordinated with adjacent signals and ramp meters.

Construction

Construction of the proposed project is planned to commence in 2021 and anticipated to be open for use by 2024. The project is expected to be implemented using the design-build delivery process and constructed over a period of three years with an estimated construction cost of approximately \$338 million. Due to recent dynamic cost escalation and funding constraints, SBCTA may need to contract out the project in more than one construction package.

Closures of the I-15 mainline, connectors, interchange ramps, and local streets may occur and would be short-term, overnight, and during off-peak hours. A Transportation Management Plan (TMP) has been prepared for the project and would be updated prior to construction to identify strategies, methods, and measures to minimize impacts on local arterials and freeway travelers.

Construction Staging

According to the TMP prepared for the project, construction staging concept plans and strategies should be implemented during project construction to help minimize delays and congestion associated with construction activities. The summary of the construction staging concept is provided below.

Stage 1

During Stage 1, work to be completed includes outside widening of the freeway mainline, and widening of bridge structures on the inside and outside of the freeway. The freeway segments where outside widening construction would occur in this stage are between Cantu-Galleano Ranch Road to south of SR-60 interchange and between Philadelphia Street and Etiwanda Avenue. The travel lanes would be shifted to allow room for construction work. The number of travel lanes on the freeway would be maintained during construction. The minimum lane width is expected to be maintained at 11 feet. The bridge structures that would also be widened to the outside include the following locations:

- E. Airport Drive bridge
- Vina Vista Overhead (OH)
- I-15/I-10 Separation
- Ontario Mills Parkway bridge
- Fourth Street bridge
- Seventh Street bridge
- MWD pipeline crossing
- Rochester OH
- Day Creek Channel
- Arrow Route
- Foothill Boulevard

The following freeway ramps would also be impacted due to the widening of the freeway mainline:

- Cantu-Galleano Ranch Road/I-15 NB on-ramp
- Jurupa Street/I-15 on- and off-ramps (NB and SB)
- I-15 NB to I-10 connectors
- WB I-10 to NB I-15 connector

- EB I-10 to NB I-15 connector
- EB I-10 to SB I-15 connector
- I-15 SB to WB I-10 connector
- Fourth Street/I-15 NB on- and off-ramps
- Fourth Street/I-15 SB on- and off-ramps
- Foothill Boulevard/I-15 NB on- and off-ramps
- Foothill Boulevard/I-15 SB on- and off-ramps

Inside widening of the bridge structures would also begin at this stage. At the locations where construction would occur in the inside median areas, the travel lanes would be shifted to the right (outside) to maintain the existing number of travel lanes on the freeway. The bridge structures that would be widened to the inside are the following:

- Riverside Avenue bridge
- I-15/SR-60 Separation
- Mission Boulevard OH
- Etiwanda Avenue bridge
- Base Line Road bridge
- Etiwanda OH
- Victoria Street bridge
- East Etiwanda Creek bridge
- Cherry Avenue bridge

Stage 2

The work to be completed during Stage 2 includes inside widening of the freeway mainline, bridge structures, and improvements of ramps and ramp-to-freeway tie-in. The travel lanes would be shifted to the right (outside) to maintain the existing number of travel lanes on the freeway and to allow room for construction work.

The freeway segments where inside widening construction in this stage would include the area north of Mission Boulevard to Airport Drive, at I-15/I-10 Separation Bridge, and south of Sixth Street to north of Sixth Street. The bridge structures that would be widened to the inside include:

- I-15/I-10 Separation
- MWD pipeline
- Rochester OH
- Day Creek Channel

- Arrow Route
- Foothill Boulevard

Ramp improvements at this stage include the following:

- Jurupa Street on- and off-ramps (NB and SB)
- NB I-15 to I-10 connectors
- WB I-10 to NB I-15 connector (Structure improvement)
- EB I-10 to NB I-15 connector
- SB I-15 to WB I-10
- I-15 SB to Foothill Boulevard off-ramp/on-ramp/NB ramps
- Fourth NB I-15 on-ramp
- Fourth SB I-15 off-ramp

Construction Closures

Full facility closures are anticipated for setting up and taking down falsework for structures over I-15, I-10, SR-60, and local streets. Full freeway closures on I-15 or SR-60 occur only at nighttime to minimize impacts to motorists. Allowable closure hour requirements would be provided as identified on the Lane Requirement Charts prepared for the project as part of the TMP. Ontario Mills Parkway, Sixth Street, and Arrow Route would have non-standard vertical clearance due to falsework for the bridge widening, and trucks would be detoured for the duration of construction. Local streets would remain open to all other traffic.

Partial mainline lane closures would be needed at nighttime or off-peak periods intermittently due to various construction activities, including K-rail operations, concrete pouring, installation of new overhead sign structures and panels, modification to existing overhead sign panels, installation of tolling system, installation of vehicle detection systems, and installation of pavement striping.

Full freeway closures at nighttime on I-15 are anticipated for installation of overhead sign structures that span over the entire freeway mainline. Full freeway closures at nighttime on SR-60, I-10, and local streets that cross under I-15 are also anticipated for falsework installation and take-down. To minimize the impact to traffic flow, these closures would be limited to nighttime only when the traffic volumes were the lowest. The closure hours would be prepared in coordination with Caltrans and the project team. During the nighttime full freeway closures, traffic would be detoured to the nearby roadways.

Ramp improvements or widening may require partial or full closure. Nighttime ramp closures are anticipated for various construction activities, including K-rail operations, concrete pouring, installation of vehicle detection systems, and installation of pavement striping. During the nighttime ramp closures, traffic would be detoured to the adjacent ramps.

The widening of the freeway structures would affect UPRR and BNSF railroad operations. Coordination with the railroads would be required to ensure that construction activities and railroad closure hours would have minimal impacts on railroad operations. In addition, coordination will take place with RCTC for the development of final construction staging plans and lane closure requirements during the Design-Build phase. SBCTA will coordinate with RCTC to make sure there are minimal impacts to RCTC Express Lane operations and to I-15 corridor travelers.

Staging Areas and Access

Potential construction staging areas are identified within the right of way. (See **Figure 1-6**, Alternative 2 (Build Alternative) for proposed locations of staging areas.) Final staging areas would be determined during the Design-Build phase of project development. All efforts would be made to include staging areas and construction easements within the proposed project footprint. Future environmental review would be required if other areas are used outside of the existing footprint. All efforts would be made to select locations that have no impacts on the environment or communities within the project area.

The construction contractor's access to the construction site would be limited to areas that include existing local roadways, interchange ramps, and the freeway mainline.

Borrow/Fill Sites

Borrow/fill would be required for the construction of the proposed project. Material excavated from the site would be used for fills as appropriate and needed. It is estimated that the project would require a total of approximately 167,530 Cubic Yard of imported borrow material for fills. Final estimates of fill requirements or material disposal requirements would be identified during the Design-Build phase of the project development.

According to the June 2018 Caltrans Construction Manual, contractors are permitted to identify and use private off-site lands and facilities for the disposal of excess materials or the acquisition of necessary borrow materials. For any site outside the project's right-of-way, the Design-Builder will be required to show that these sites comply with the State Mining Reclamation Act as well as all local, state, and federal environmental and permitted use regulations. This will include ensuring that all import material comes from permitted commercial material providers and does not contain hazardous materials, in accordance with Caltrans Standard Specifications. The Design Builder will prepare a submittal to Caltrans identifying and obtaining environmental approvals for the selected site(s). The environmental clearance of the selected sites will include compliance with all Federal and State regulatory measures that are required to ensure that site construction activities would not result in significant impacts on the environment.

1.7 Identification of the Preferred Alternative

The draft IS/EA prepared and approved for the I-15 CP was circulated for public review and comments from February 15 to March 16, 2018. After the public circulation period, all comments received were reviewed and evaluated by the Project Development Team (PDT). The project design was revised to address public comments regarding soundwalls. The revisions included an update of the locations and lengths of the soundwalls that were identified in the

DED. After comparing and weighing the benefits and impacts of all alternatives, the Project Development Team has identified Alternative 2 – Build Alternative as the preferred alternative in a meeting held on May 24, 2018. In comparison to the No-Build alternative, the Build Alternative would meet the purpose and need of the project to reduce congestion, increase mainline capacity, improve travel time within the corridor; and improve trip reliability and mobility options along the corridor. The Build Alternative meets the purpose and need of the project, while avoiding and minimizing environmental impacts.

1.8 Alternatives Considered but Eliminated from Further Discussion Prior to the “DRAFT” Initial Study/Environmental Assessment (IS/EA)

This section typically includes all alternatives that were considered during the project development process, but were eliminated before the draft ED. However, due to the known financial limitations since the beginning of the I-15 corridor improvement planning efforts, and based on the feasibility studies prepared by SBCTA for the corridor, only the Express Lanes Build Alternative was considered as a viable alternative to solve the congestion problem within the project corridor. Other considered options include the following:

Reversible Lanes

Consideration was given to the reversible lanes configuration and it was determined that it is not feasible. It therefore was rejected as a build alternative for the project and was not considered in the environmental review. The following is a discussion of the reasons for rejecting this alternative:

Geometric Feasibility of Reversible Lanes

Within the project limits, I-15 is generally an eight-lane divided, controlled-access freeway with four GP lanes in each direction and auxiliary lanes along portions of the freeway. The existing median width varies from 46 feet to 70 feet.

Freeway reversible lanes facilities must be separated by concrete barriers on both sides in a high-speed roadway setting. They are typically constructed in the median of freeway facilities and may be one, two or more lanes wide. Shoulders are required on both sides of the reversible lane(s) to accommodate travel in both directions. To provide continuous reversible lanes, the reversible lane facility would need to be constructed either along the northbound or southbound directions to avoid conflicts with overcrossings and connector columns in the median. The presence of existing overcrossing bridge column in the median at the I-10/I-15 interchange restricts the additional inside and outside widening required to provide shoulders on both sides of reversible lanes as well as additional inside shoulders for existing GP lanes in each direction. Similar constraints exist at the SR-60/I-15 interchange. At Jurupa Street overcrossing, additional widening is restricted by existing bridge abutments, requiring complete structure replacement.

The existing grade differential up to 1 foot between the NB and SB roadbeds through most of the I-15 corridor within the project limits does not permit a sideways lane change to access in and out of the reversible lanes at proposed access locations. Instead, a ramp would need to be constructed at access locations to provide a smooth transition between the two uneven roadbeds. Additional outside widening may be required to provide room for the crossover ramp. The

existing grade differential may also limit the number of access locations for traffic to either enter or exit the reversible lane facility.

Proposing reversible lane within the corridor would also be inconsistent with Riverside County I-15 Express Lanes Project (EA 08-0J0800), which is under construction between Cajalco Road and Cantu-Galleano Ranch Road. Implementing reversible lanes would also be inconsistent with SCAG RTP.

Traffic Demand and Analysis of Reversible Lanes on I-15

Reversible lanes add capacity to the peak direction by borrowing capacity from the off-peak direction. Traffic characteristics for successful implementation of reversible lanes consist of facilities that experience large directional traffic imbalances and congestion during peak periods and are forecast to do so in perpetuity. To warrant reversible lanes, peak-period traffic volumes should forecast substantial directional imbalance. A directional split of 70/30 percent is commonly used as a threshold for the level of traffic imbalance needed to warrant a reversible facility. The majority of I-15 within the project limits has a directional split of approximately 50/50 percent.

Reversible lanes would not fulfill the purpose and need of the proposed Project in that it would only provide congestion relief in one direction of travel while congestion occurs simultaneously in both directions through much of the project limits. The Traffic Study Report shows that existing peak-hour traffic volumes in the southern portion of the project limits are similar in both directions of travel making the reversible lanes alternative not suitable. The Traffic Study also shows that substantial delays are expected in both directions of travel in both the AM and PM peak period for the foreseeable future.

Typically, reversible lanes are operated by remotely opening and closing gates at access points twice every 24 hours during low-volume periods between the directional peaks. This corridor has low volumes only at night; it does not have a low-volume midday period when operations could be conveniently reversed. This means that the process of closing gates must occur during periods of relatively high traffic volumes, causing operational issues.

Value Analysis

A Value Analysis (VA) was conducted for the project in May 2017 to identify value-improving alternatives. The VA team developed nine alternatives recommending design and construction strategies to reduce cost and/or improve performance of the proposed project improvements. The proposed nine alternatives were discussed in the PDT meeting held on June 22, 2017. The PDT decided to accept one alternative, conditionally accept three alternatives, and reject five alternatives. The summary of proposed VA alternatives is listed in **Table 1-14**.

Table 1-14. Summary of Value Analysis Study Alternatives

VA Alternative	Description	Status (A/C/R*)	Performance Change	Cost Savings
1.0	Use Accelerated Bridge Construction (ABC) methods for bridge construction, including pre-constructed composite components for bridge widening where feasible.	C	+1%	\$6,110,000
2.0	Use precast bridge substructure components on multiple-span bridge structures.	C	+2%	\$2,847,000
3.0	Widen on one side in lieu of both sides in outside widening locations.	R	+2%	\$5,290,000
4.0	Use maximum inside shoulder width of 4 feet to reduce the outside widening in a 5-mile segment from Jurupa St to Foothill Blvd	R	+1%	\$19,150,000
5.1	Use continuous access to the Express Lanes in lieu of a buffer facility with delineators.	R	+5%	\$460,000
5.2	Eliminate four ingress/egress weaving lanes within the project limits.	R	+3%	0
6.0	Use regular lean concrete base in lieu of rapid strength concrete.	A	+2%	\$7,772,000
7.0	Restripe the #1 and #2 GP lanes to 11 feet and construct the #2 Express Lane to 11 feet.	R	No change	\$8,500,000
8.0	Eliminate the railroad shoofly at Mission Blvd	C	No Change	\$1,204,000
* A – Accept, C – Conditionally Accept, R – Reject Source: I-15 CP Value Analysis Report, 2017.				

Following is a summary of the Project Development Team (PDT) analysis and decisions to accept, conditionally accept, or reject the alternative:

VA Alternative 1.0 – Use ABC Method for Bridge Construction

This alternative proposes to use ABC methods for bridge construction, including using pre-constructed composite components for widening where feasible. The main benefit of this alternative is to reduce construction costs and time. This concept would be applied to narrow bridge widening with short spans. This alternative uses precast girders and cast-in-place deck constructed off-site and transported to the construction site. It may be feasible to use precast deck panels in lieu of cast-in-place deck, and include the railing as part of the composite production. Aesthetics considerations could be a potential constraint for this alternative. In order to achieve the proposed cost savings, extensive use of precast girders is necessary. In addition, to achieve the proposed cost savings, it would be necessary to extensively use precast columns and abutments.

This alternative could be available for further assessment during the Design-Build phase. The PDT conditionally accepted this VA alternative.

VA Alternative 2.0 – Use Precast Bridge Substructure

This alternative proposes to use precast bridge substructure components on multiple-span bridge structures on 19 bridges (total of 66 abutments and 52 columns). The main benefit of this alternative is an expedited bridge construction because precast bridge elements do not require

falsework and cure time. As a result, there would also be fewer delays for motorists and less construction activity impacts to residents and businesses.

The PDT conditionally accepted this VA alternative. This alternative could be available for further assessment during the Design-Build phase, pending further structural analysis and seismic requirements.

VA Alternative 3.0 – Widen on One Side

This alternative proposes to widen on one side in lieu of both sides in outside widening locations. The main benefit of this alternative is reducing construction time and cost. With less construction time, there would be fewer delays for motorists and less impact on local roads.

This alternative could result in conflicts with the existing type of pavement sections along large horizontal curves, vertical clearances, median connector columns, would require additional retaining walls, and require additional widening to accommodate shoulder width that would be added between the Express Lanes and GP lanes. If the centerline is shifted, then the existing median pavement would need to be replaced. This alternative would require additional technical studies that may result in delay of the overall project schedule. This VA alternative was rejected by the PDT.

VA Alternative 4.0 – Use Maximum of Four Feet for Inside Shoulder

This alternative proposes to construct a maximum inside shoulder width of four feet where outside widening is proposed from Jurupa Avenue to Foothill Boulevard. The main benefit of this concept would be to save sections of the pavement. The proposed segment is 5.5 miles long and a shorter 3,000-foot ingress/egress lane. This would be done on most of the roadway except for selected locations where existing bridge columns and sign posts do not provide the necessary spacing, and require the elimination of the proposed weaving lanes.

This alternative was proposed as part of the development of the preliminary geometric plans and rejected by Caltrans because there was insufficient justification for a reduced non-standard shoulder width in this section. The PDT rejected this VA alternative.

VA Alternative 5.1 – Use Continuous Access

This alternative proposes to provide continuous access into and out of the Express Lanes in lieu of a 24-inch buffer facility with delineators. This would also include an eight-inch broken stripe on the pavement. The main benefit of this alternative is improving access to and from the Express Lanes, which would optimize their use and improve traffic operations. Driver expectations are better accommodated because there would be enough weaving length to allow for decision-making and lane changes.

This alternative does not provide the required confidence as it relates to revenue leakage, and is not supported by SBCTA's tolling policies and the planned Concept of Operations for I-15. This VA alternative was rejected by the PDT.

VA Alternative 5.2 – Eliminate Ingress/Egress Weave Lane

The baseline concept constructs a 12-foot ingress/egress weaving lane between the Express Lanes and GP lanes at eight locations within the project limits. This alternative proposes to eliminate the ingress/egress weaving lane. The main purpose of this alternative is to provide the ability to maintain a standard inside shoulder width, and standard and consistent 12-foot lane widths at the ingress/egress locations. It would also help reduce the extent of design exceptions. Driver expectations are improved because of consistency with the I-15 Corridor Express Lanes concept.

However, there is low level of confidence that this alternative would function as proposed. Additional VISSIM analysis is needed to demonstrate that this alternative could perform as a replacement of the weave lane. The PDT rejected this VA alternative.

VA Alternative 6.0 – Use Regular Lean Concrete Base

The baseline concept uses rapid strength lean concrete base (LCB) for flexible underlayment of the pavement. This alternative proposes to use regular lean concrete base. The main benefit of this alternative is that it would reduce construction costs. Maintainability would also be improved because rapid strength concrete has less life than regular concrete, approximately 10 years compared to the 40-year life span of the LCB.

The PDT accepted this VA alternative. The pavement structural section of the project was updated to include the use of regular LCB instead of rapid setting LCB concrete.

VA Alternative 7.0 – Restripe #1 and #2 GP Lanes

The baseline concept includes GP lane widths from 12 to 11 feet in some locations. This alternative proposes to restripe the Number One and Number Two GP lanes to 11 feet and construct the number two Express Lane to 11 feet along the project length. The benefit of this VA alternative is that it provides a consistent driver experience.

This alternative was studied in the feasibility phase and was rejected by Caltrans because there was insufficient justification to have a non-standard lane width in this section where additional right of way is available. The PDT rejected this VA alternative.

VA Alternative 8.0 – Eliminate the Railroad Shoofly at Mission Boulevard

The baseline concept constructs a railroad shoofly at Mission Boulevard to provide the space needed to widen the bridge while retaining railroad operations. This alternative proposes to eliminate the proposed railroad shoofly at Mission Boulevard. The main benefit of this alternative reduces the construction cost, and coordination requirements with UPRR.

This alternative is being discussed with UPRR and various alternatives are being proposed for this location. The proposed shoofly at Mission Boulevard has the largest project footprint and was considered in the environmental compliance review. This VA alternative was conditionally accepted by the PDT and would be available for further assessment during the Design-Build phase.

1.9 Permits and Approvals Needed

Table 1-15 below identifies the permits, reviews, and approvals required for project construction.

Table 1-15. Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Federal Endangered Species Act Section 7 Consultation	Informal consultation was completed with No-Effect determination concurred upon in an email on June 19, 2017.
United States Army Corps of Engineers (USACE)	Clean Water Act Section 404 Nationwide Permit	Application to be submitted after Project Report and Final ED approval
California Department of Fish and Wildlife (CDFW)	1602 Streambed Alteration Agreement	Application to be submitted after Project Report and Final ED approval
USFWS and CDFW	MSHCP consistency review	The MSHCP consistency review process was completed. The agencies consistency finding email was received on June 5, 2018.
Santa Ana Regional Water Quality Control Board	Clean Water Act Section 401 Certification	Application to be submitted after Project Report and Final ED approval
Federal Highway Administration (FHWA)	Air Quality Conformity Analysis Determination	The Air Quality Conformity Analysis was transmitted to FHWA on July 2, 2018. On August 7, 2018 FHWA issued the required Air Quality Conformity Analysis determination letter for this project.
Local Jurisdictions: County of San Bernardino, County of Riverside, City of Rancho Cucamonga, City of Ontario, City of Fontana, City of Eastvale, and City of Jurupa Valley	Freeway Agreement	Agreements with each jurisdiction for work completed within its area to be executed prior to construction
California Public Utilities Commission (CPUC)	General Order 88-B Authorization.	CPUC approval will be obtained prior to any construction work at any of the railroad overheads

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 project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- This project is located outside of National Marine Fisheries Service (NMFS) jurisdiction; therefore, an NMFS species list is not required and no effects to NMFS species are anticipated.
- Coastal Zone: The proposed project is not included in a coastal zone, and therefore is not subject to the federal Coastal Zone Management Act of 1972 (CZMA) or to the California Coastal Act of 1976.
- Wild and Scenic Rivers: There are no State or federally designated or candidate rivers within the project area. Therefore, the project is not subject to the National Wild and Scenic Rivers Act (16 United States Code [USC] 1271) and the California Wild and Scenic Rivers Act (Pub. Res. Code sec. 5093.50 et seq.).

Where short-term (construction) and long-term (operation) impacts would differ, or where these impacts warrant independent discussion, separate headings are included and discussions are provided, as appropriate.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Existing and Future Land Use

Information used in this section is based on the October 2017 *Community Impact Assessment*.

Existing Land Use and Future Land Use

I-15 is a major transportation route that begins at the junction with I-5 in the City of San Diego, 10 miles north of the U.S./Mexico border, and ends at the U.S./Canada border by way of California, Nevada, Arizona, Utah, Idaho, and Montana. The I-15 CP is 14.7 miles long. The project would add Express Lanes in both Riverside and San Bernardino counties. The southern portion of the project traverses the cities of Eastvale and Jurupa Valley in Riverside County, and the northern limit of the project continues through the cities of Ontario, Rancho Cucamonga, and Fontana in San Bernardino County. At the northern project limits, existing land uses include vacant land, single family residential, some commercial development surrounding Summit Avenue and agricultural land (**Figure 2-1**, Sheet 1). Continuing south along the alignment land uses remain primarily residential until the corridor crosses Etiwanda Avenue where land uses consist almost entirely of industrial and commercial development from Etiwanda Avenue south to the southern terminus of the project, just south of SR-60 (**Figure 2-1**, Sheet 2 and Sheet 3).

The I-15 CP Community Impact Assessment contains descriptions of general plan land use designations for Riverside and San Bernardino counties and the cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana. A summary of these descriptions is provided in **Table 2-1** below.

Riverside County

Riverside County is located in Southern California, north of San Diego County and Imperial County, south of San Bernardino and Los Angeles counties, and east of Orange County. Riverside County encompasses 7,206 square miles, making it the fourth-largest county in California (U.S. Census Bureau 2010). The county extends westward from the Colorado River to within 14 miles of the Pacific Ocean south of SR-74 just east of San Clemente, a stretch of some 200 miles. The Riverside County population is approximately 2,266,899 people (U.S. Census Bureau 2014) and contains 28 incorporated cities; however, more than 75 percent of the county's land area, and one-quarter of the county's population, lie outside these municipalities. These unincorporated areas are made up of 48 recognized communities, individual farms, and scattered rural residences.

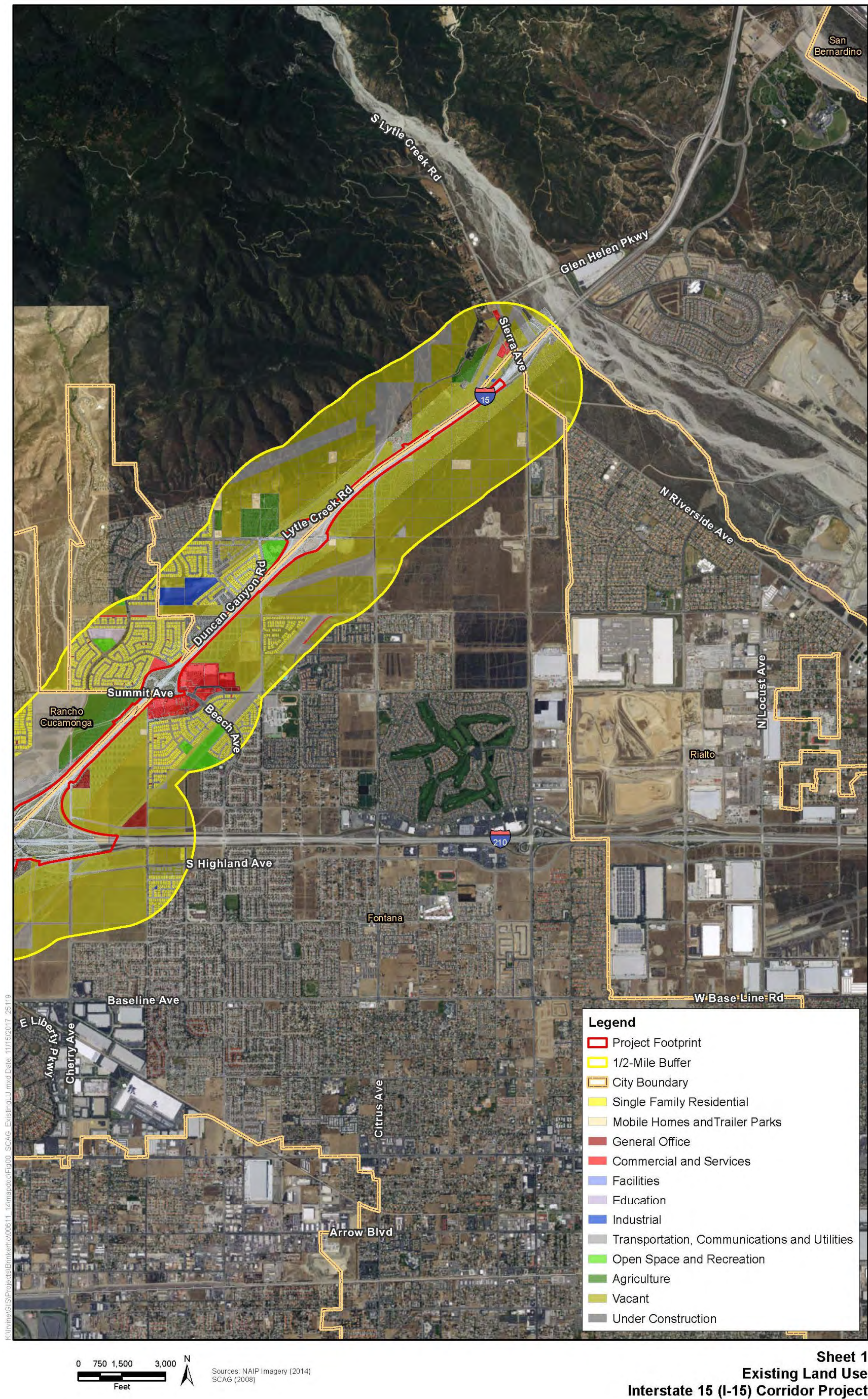
The county is roughly divided into eastern and western regions by the San Jacinto and Santa Rosa mountains. These eastern and western regions of the county are differentiated by their physical characteristics as well as their historic growth patterns. The western portion of the county is roughly half the size of the eastern portion and contains the greatest concentration of population and growth. The western region of Riverside County encompasses numerous incorporated cities as well as many communities within the unincorporated areas. The majority of its residents are concentrated in the incorporated cities of Corona, Riverside, Beaumont, Banning, Norco, Lake Elsinore, Perris, Hemet, San Jacinto, Moreno Valley, Calimesa, Canyon Lake, Murrieta, and Temecula. The eastern portion of Riverside County is characterized by its desert terrain and relatively less populated and congested communities. There are no unincorporated areas of Riverside County adjacent to the proposed project.

Major development in the County of Riverside relative to the proposed project include RCTC's I-15 Tolled Express Lanes Project, which would extend from SR-60 south through Riverside County to Cajalco Road near the City of Corona. Implementation of this RCTC sponsored project along with the proposed project would allow drivers continued through access on I-15 for travel between counties.

City of Eastvale

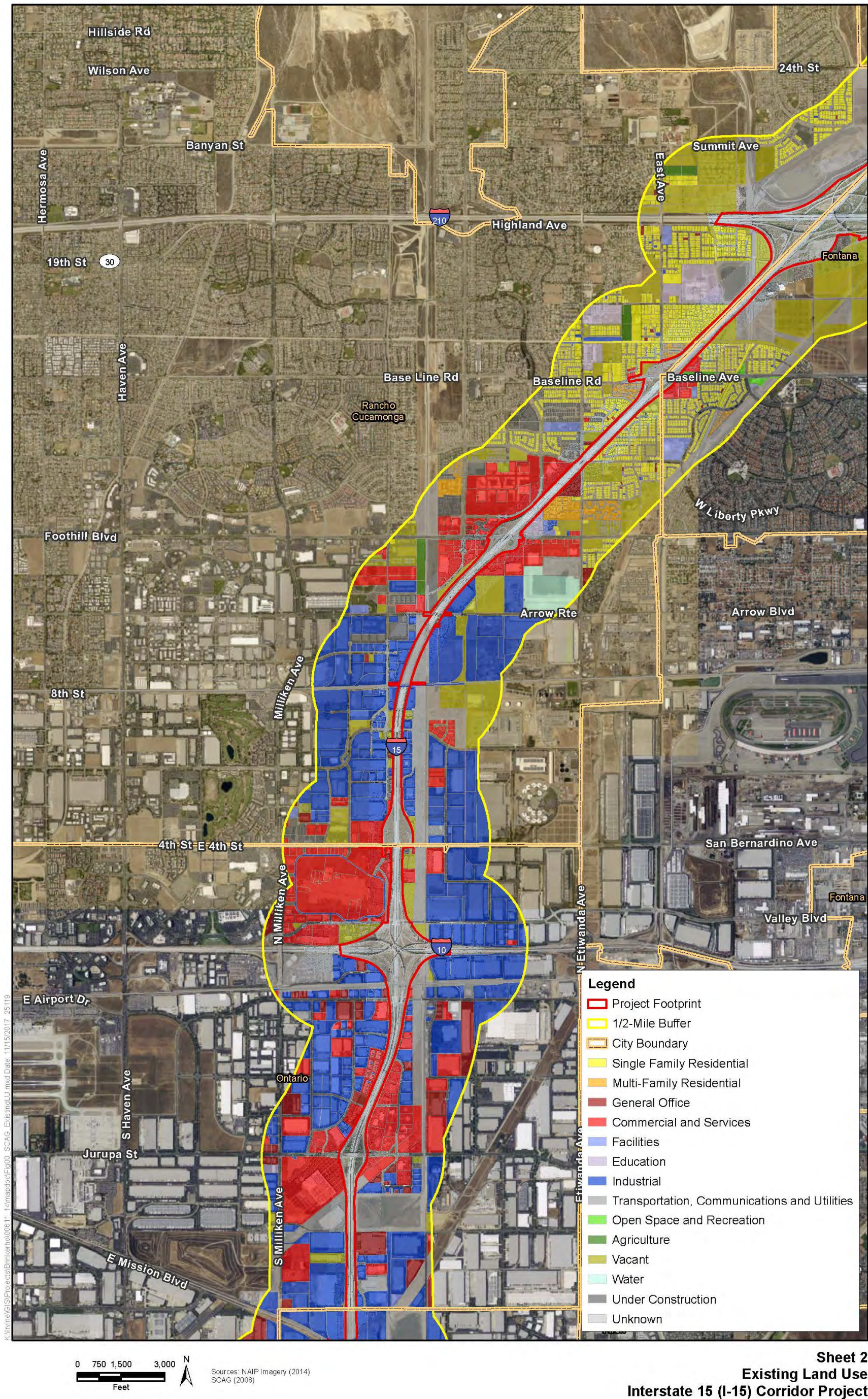
The City of Eastvale, incorporated in fall of 2010, is located in the northwestern portion of Riverside County. It is bounded by San Bernardino County on the west (City of Chino) and north (City of Ontario), the City of Norco on the south, and the I-15 to the east. Eastvale has a land area of approximately 11.4 square miles (U.S. Census Bureau 2010) and its population is about 57,016 (U.S. Census Bureau 2014).

Figure 2-1. Existing Land Use



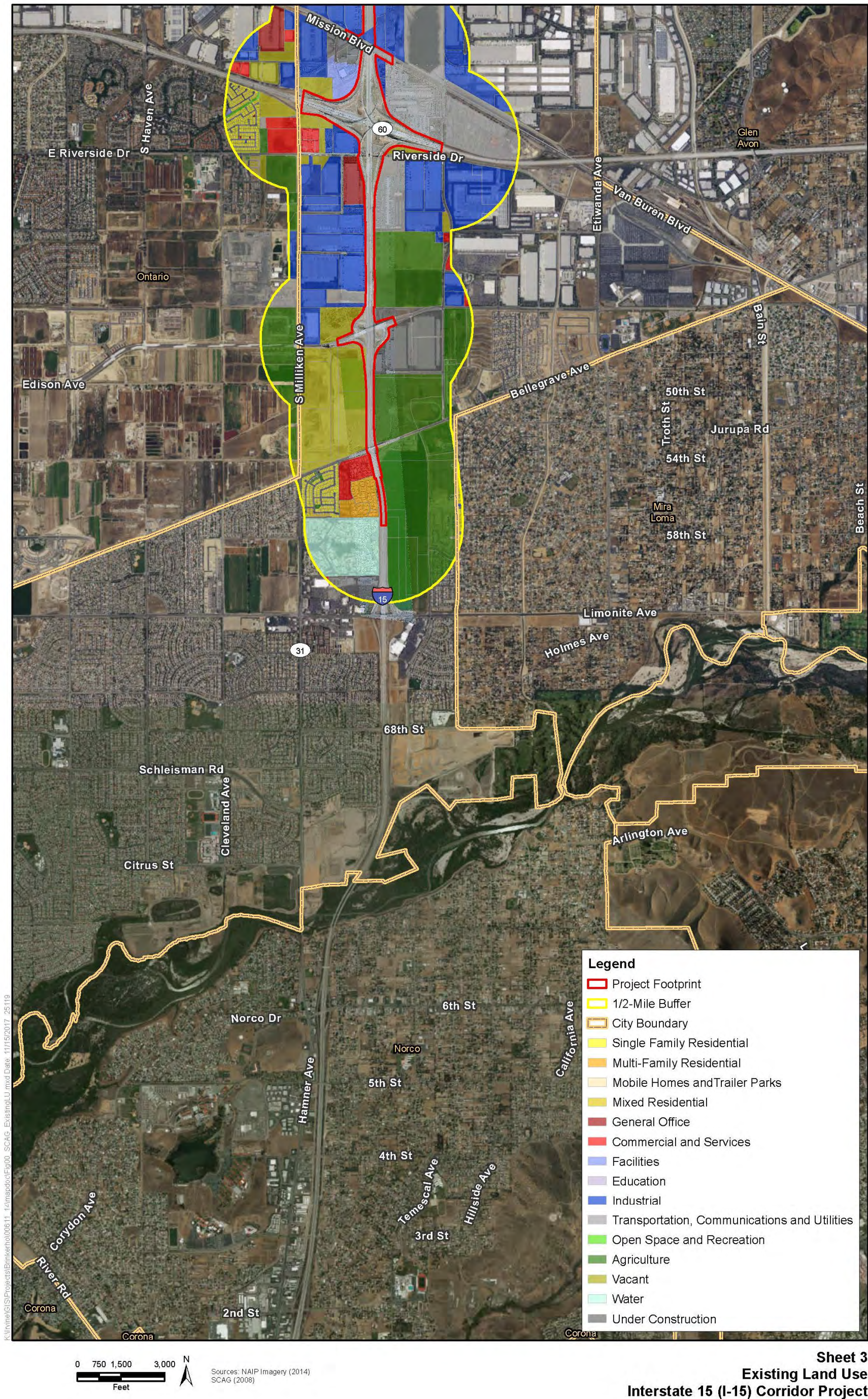
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Figure 2-1. Existing Land Use
Sheet 2



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Figure 2-1. Existing Land Use
Sheet 3



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Until the early 1990s, Eastvale was home to a large concentration of dairies as part of the larger Chino Dairy area. Due to lack of affordable developable land in the surrounding area, however, many of the dairies not under the protection of the San Bernardino County Agricultural Preserve were under pressure to develop (City of Eastvale 2012). As this transformation unfolded, development in Eastvale happened quickly, in part because of the early 2000's housing boom and partially due to its excellent freeway access to employment centers.

The project area runs north-south along the eastern border of Eastvale, separating Eastvale from Jurupa Valley to the east. The portion of the study area south of Bellegrave Avenue consists mainly of medium- to high-density residential uses and business park land uses. **Figure 2-2** provides the City's General Plan land use map.

As shown in **Table 2-1**, there are many planned and current development projects within Eastvale. The Goodman Commerce Center is a 200-acre mixed-use development that would provide logistics, retail, medical, and business park facilities. The development, which is under construction, would be located adjacent to I-15, between Cantu-Galleano Rancho Road and Bellegrave Avenue. Apart from Goodman Commerce Center, Eastvale has a mix of additional major commercial and industrial developments.

Table 2-1. Major Developments Within the Study Area

Name	Jurisdiction	Proposed Uses	Status
Transportation Projects			
I-15 Corridor Project	RCTC – Riverside County	Construct one to two tolled Express Lanes in each direction.	Project Environmental Document was approved in May 2016. Construction is anticipated to begin in 2018 (RCTC 2017).
I-10 Corridor Project	SBCTA – San Bernardino County	The project proposes to widen the corridor (a distance of 33 miles) by providing two express lanes in each direction from the Los Angeles County limits to California Street near SR 210 in the City of Redlands, San Bernardino County.	Draft Environmental Document (EIR/EIS) was completed in April 2016. Environmental document was approved in July 2017. Construction of that portion between the Los Angeles County line and I-15 is anticipated to be completed early 2022 (SBCTA 2017).
Development Projects			
Goodman Commerce Center	City of Eastvale	Approximately 205 acres of commercial retail, business park, warehouse, hospital, and industrial development.	The EIR was approved in 2014; ground breaking was in 2015. The timing of the final design and build-out of the project will depend on market conditions (City of Eastvale 2014).
Industrial Development	City of Eastvale	Development of two industrial buildings, totaling 156,478 square feet, on two parcels within a net area of approximately 7.32 acres.	Completed addendum to Mitigated Negative Declaration; construction plans were provided to the City in spring of 2016 (City of Eastvale 2016a).
LBA Realty Development	City of Eastvale	Construction and operation of a new 446,173-square-foot industrial warehouse building, parking, utility and storm water infrastructure, and landscaping on approximately 24 acres.	Draft EIR was approved in April 2016; response to comments and Final EIR is being prepared. Construction plans were submitted to the City (City of Eastvale 2016a).

Table 2-1. Major Developments Within the Study Area (continued)

Name	Jurisdiction	Proposed Uses	Status
Costco Major Development Review and Conditional Use Permit	City of Eastvale	Major Development Review for construction of an approximately 158,000-square-foot Costco warehouse building with a tire center and outdoor food court area at the commercial portion of the Goodman Commerce Center on 16 acres. Two Conditional Use Permits required for operation of the tire center and the sale of alcohol. The tire center will include retail sales and an installation area that will occupy approximately 5,200 square feet of the building. A fueling station and car wash are proposed directly off Hamner Avenue.	Approved by Planning Commission on November 16, 2016; construction to begin spring of 2018 and the store will be open in fall of 2018 (City of Eastvale 2017).
Cloverdale Marketplace – Phase II	City of Eastvale	A 130,000-square-foot neighborhood shopping center on 4 acres.	Under construction (SRA 2017).
Hamner Logistics Center Riverside Building	City of Eastvale	A 41,026-square-foot development with office space and parking on 2.62 acres.	Under construction (CBRE 2016a).
Hamner Logistic Center Hamner Building	City of Eastvale	A 115,452-square-foot development with office space, 127 parking stalls, and other facilities on 9.31 acres.	Under construction (CBRE 2016b).
Eastvale Marketplace	City of Eastvale	A 71,472-square-foot neighborhood retail center with multi-tenant and single-tenant buildings and associated parking facilities on 7.64 acres.	Conditionally approved by the Planning Commission on November 18, 2015 (City of Eastvale 2015).
Ontario Ranch	City of Ontario	Consists of 12 planning areas for residential, commercial, and industrial land development. Overall approved development within 2,960 acres includes 10,231 single-family residential units, 6,132 multi-family residential units, 525,720 square feet for commercial use, and 550,000 square feet for a business park. In process are applications for 1,568 single-family residential units and a 1,951,146-square-foot industrial park on 447 acres.	EIRs were approved for most of the planning areas between 2005 and 2007, except for some that were approved in 2013 and 2015 or are in the approval process (City of Ontario 2017b).

Table 2-1. Major Developments Within the Study Area (continued)

Name	Jurisdiction	Proposed Uses	Status
Empire Lakes/Rancho Cucamonga Industrial Area Specific Plan Amendment	City of Rancho Cucamonga	Amends the Empire Lakes Specific Plan to allow future redevelopment of the golf course with a mixed-use project of high-density residential, commercial, and office use. Project intends to incorporate use of active transportation and transit. In total, the Empire Lakes Specific Plan is 347 acres.	Final EIR was approved in April 2016. The timing of the final design and build out of the project will depend on market conditions (City of Rancho Cucamonga 2017).
Day Creek Square	City of Rancho Cucamonga	A total of 380 residential units, including attached and detached homes, a 71-room hotel, and two restaurant pads, totaling approximately 12,000 square feet on 28.4 acres of land.	May 24, 2016, formal submittal by applicant (City of Rancho Cucamonga 2017). Community meeting held in spring of 2017. The project was approved by the Planning Commission in June 2017.
North Eastern Sphere Annexation Project	City of Rancho Cucamonga	Develop of a residential "village" on 1,200 acres of land with a mix of residential, neighborhood retail and service commercial, and public uses.	The North-Eastern Sphere Annexation Specific Plan and EIR are in the process of being reevaluated and is anticipated to be scheduled for Planning Commission and City Council review during the first quarter of 2019. Submittal to LAFCO will occur after Council approval (City of Rancho Cucamonga 2017).
Westgate Specific Plan	City of Fontana	Mixed residential, school, retail, office, and business uses as well as open space on 964 acres.	Two major development projects have been completed within the plan boundary: Falcon Ridge Town Center, with 415,000 square feet of retail uses, and Caltrans' 124,000-square-foot Transportation Management and Southern Regional Lab Facilities. A Final Program EIR that amends the plan boundaries and land use distribution was approved in 2015. The timing of the final design and build-out of the project will depend on market conditions (City of Fontana 2017a).
Ventana at Duncan Canyon Specific Plan	City of Fontana	Corporate office corridor adjacent to I-15 that includes mid-rise offices, multi-story buildings, hotels, quality restaurants, and 842 residential units on 105 acres.	The plan and EIR were approved in 2007, but the area remains mostly undeveloped (City of Fontana 2017b).
Monarch Hills Residential Development	City of Fontana	Development of 472 residential units on 136.4 acres.	Notice of preparation released and information meeting occurred November 16, 2016 (City of Fontana 2017c).

City of Jurupa Valley

The City of Jurupa Valley is located in northwestern Riverside County bordered on the south by the Santa Ana River and on the north by San Bernardino County (Fontana). As discussed above, I-15 serves as a boundary between Jurupa Valley and the City of Eastvale. Jurupa Valley covers approximately 44 square miles with a population of approximately 98,843 (U.S. Census Bureau 2014).

Jurupa Valley was incorporated in 2011 to maintain more control over preserving its rural and semi-rural equestrian roots (Taxin 2014). The majority of the land within the city is designated by the general plan as Very Low and Low-Density Residential.

The proposed project runs north-to-south on the western boundary of the city. Land uses adjacent to I-15 include business parks, commercial retail, and heavy industrial. **Figure 2-3** provides the City's General Plan land use map. No existing or planned major developments were identified within Jurupa Valley. Therefore, no developments are included in **Table 2-1** or discussed here.

San Bernardino County

San Bernardino County is the largest county in the continental United States, with a land area of 20,057 square miles (U.S. Census Bureau 2010) and comprises approximately 13 percent of California's area. The county is located in the southeastern portion of California. It is bordered by Los Angeles County, Orange County, and Kern County to the west; the Colorado River and the states of Arizona and Nevada to the east; Riverside County to the south; and Inyo County and the southwest corner of Clark County, Nevada, to the north. However, of the almost 13 million acres comprising San Bernardino County, approximately 10.5 million acres (approximately 81 percent) are actually owned and controlled by federal agencies, including the Federal Bureau of Land Management (6 million acres) and the U.S. Department of Defense (1.9 million acres). Of the remaining 19 percent, approximately four percent lies within 24 incorporated cities (San Bernardino County 2014a). According to the 2010–2014 American Community Survey 5-Year Estimates, the largest cities in the county are San Bernardino, Fontana, Rancho Cucamonga, Ontario, and Victorville. The San Bernardino County estimated population is approximately 2,078,586 (U.S. Census Bureau 2014).

For regional planning purposes, the San Bernardino County General Plan divides the county into three regions based upon distinctions in terrain, issues, and opportunities: The Valley Planning Region, the Mountain Planning Region, and the Desert Planning Region. These regions are the basis for regional planning policies contained in the general plan.

The Mountain Planning Region is located north and east of the Valley Planning Region. Nearly 82 percent of the lands here are public, managed mainly by the U.S. Forest Service. It consists mostly of mountain type geographies, including forests, meadows, and lakes.

The Desert Planning Region comprises about 93 percent of the land in San Bernardino County and encompasses the remaining northern and eastern portions of the county not in the Valley or Mountain regions. Its geography is defined by the Mojave Desert as well as mountains and dry valleys.

The Valley Planning Region is located in the southwest corner of the county. It includes only 2.5 percent of the county's total land area, but approximately 75 percent of the county's inhabitants. The proposed project falls within this region. Within the Valley Planning Region and

project vicinity, SBCTA is developing several regional transportation projects, including interchange improvements at the I-15/I-215 interchange; interchange improvements at the I-15/Baseline Road interchange; and the I-10 Corridor Project, which, similar to the proposed project, involves adding Express Lanes to I-10 between Los Angeles County and Redlands.

City of Ontario

The City of Ontario is located in the Valley Region of San Bernardino County, approximately 35 miles east of Los Angeles. It is bordered by the City of Eastvale (Riverside County) to the south, the cities of Chino and Montclair to the west, Upland and Rancho Cucamonga to the north, and the City of Fontana to the east. As the fourth largest city in San Bernardino County, the population is estimated to be 169,089 (U.S. Census Bureau 2014) with a city area of approximately 50 square miles (U.S. Census Bureau 2010).

The proposed project is located in the eastern portion of the city. The nearby land uses are mostly designated by the general plan as Industrial and General Commercial uses, with a small area of Non-Recreation Open Space adjacent to the project. **Figure 2-4** provides the City's General Plan land use map. As shown in **Table 2-1**, Ontario Ranch is the main major development within the City of Ontario. The development consists of 12 planning areas for residential, commercial, and industrial land development.

The development would occur on 2,960 acres of land and include 10,231 single-family residential units, 6,132 multi-family residential units, 525,720 square feet of commercial use, and 550,000 square feet of business use. The development would be located west of Hamner Avenue, south East Riverside Drive, east of Euclid Avenue, and north of Bellegrave Avenue.

City of Rancho Cucamonga

Rancho Cucamonga is located at the base of the San Gabriel Mountains in western San Bernardino County. It is bounded by the cities of Upland, Fontana, and Ontario and parts of unincorporated San Bernardino County. Rancho Cucamonga, the third-largest populated city in San Bernardino County, has a population of approximately 174,305 (U.S. Census Bureau 2014) and comprises approximately 40 square miles (U.S. Census Bureau 2010).

The proposed project is located in the easternmost side of the city. Existing land uses within the study area include several schools and a concentration of commercial, mixed-use, residential, and industrial land uses bordering the freeway. The city's flood control/utility corridor also intersects the project area. To provide a high level of public safety, areas that are prone to flooding, potential wildland fires, and geologic and seismic hazards are designated to remain mostly natural open space. By limiting development potential, the residents have the added benefit of a scenic resource (City of Rancho Cucamonga 2010).

The northernmost portion of the I-15 corridor is considered the eastern border for the Equestrian/Rural Area Overlay District, which is contained in the City's General Plan land use map. The Equestrian/Rural Area Overlay District allows for the keeping of horses and other farm animals. All new developments within this overlay zone are required to provide community and local trails for equestrian use (City of Rancho Cucamonga 2010). **Figure 2-5** provides the City's General Plan land use map.

As shown in **Table 2-1**, there are three major development projects within Rancho Cucamonga. The North-Eastern Sphere Annexation Project, the largest project within Rancho Cucamonga, would develop a residential village with a mix of residential, neighborhood retail, service commercial, and public uses on 1,200 acres of land. The development would be located generally north of I-210, west of I-15, and east of Haven Avenue. Apart from the Eastern Sphere Annexation Project, the Empire Lakes/Rancho Cucamonga Industrial Area Specific Plan Amendment would allow for the redevelopment of an existing golf course with a mixed-use project of high-density residential, commercial, and office use. In addition, the Day Creek Square development would build 380 residential units, a 71-room hotel, and two restaurant pads on 28.4 acres of land. This development would be located at the southwest corner of Day Creek Boulevard and Baseline Road, approximately 1.3 miles west of I-15.

City of Fontana

As the second-largest city in San Bernardino County, Fontana traverses approximately 42.43 square miles (U.S. Census Bureau 2010) and has a population of approximately 204,950 (U.S. Census Bureau 2014). The city is bordered by the San Gabriel Mountains to the north, Rialto and the unincorporated community of Bloomington to the east, Jurupa Valley to the south, and the cities of Rancho Cucamonga and Ontario to the west.

The proposed project runs north–south on the western boundary of the city. Land uses surrounding the project include commercial, residential, and open space. **Figure 2-6** provides the City’s General Plan land use map.

As shown in **Table 2-1**, there are three major development projects within Fontana. The Westgate Specific Plan, the largest project within Fontana, would develop residential uses, schools, offices, businesses, and open space on 964 acres of land. The development would be located adjacent to the junction of I-15 and I-210. Apart from the Westgate Specific Plan, the Monarch Hills Residential Development would result in the development of 472 residential units. In addition, the Ventana at Duncan Canyon Specific Plan would create a corporate office corridor adjacent to I-15 that would include midrise offices, multi-story buildings, hotels, restaurants, and 842 residential units.

2.1.1.2 Consistency with Federal, State, Regional, and Local Plans

SCAG is a metropolitan planning organization that represents six counties, 190 cities, and more than 19 million residents. SCAG develops long-range solutions for regional challenges related to transportation, air quality, housing, growth, hazardous waste, and water quality. SCAG has developed strategies that specifically address growth and transportation issues, including the 2016–2040 RTP/SCS and the Federal Transportation Improvement Program (FTIP).

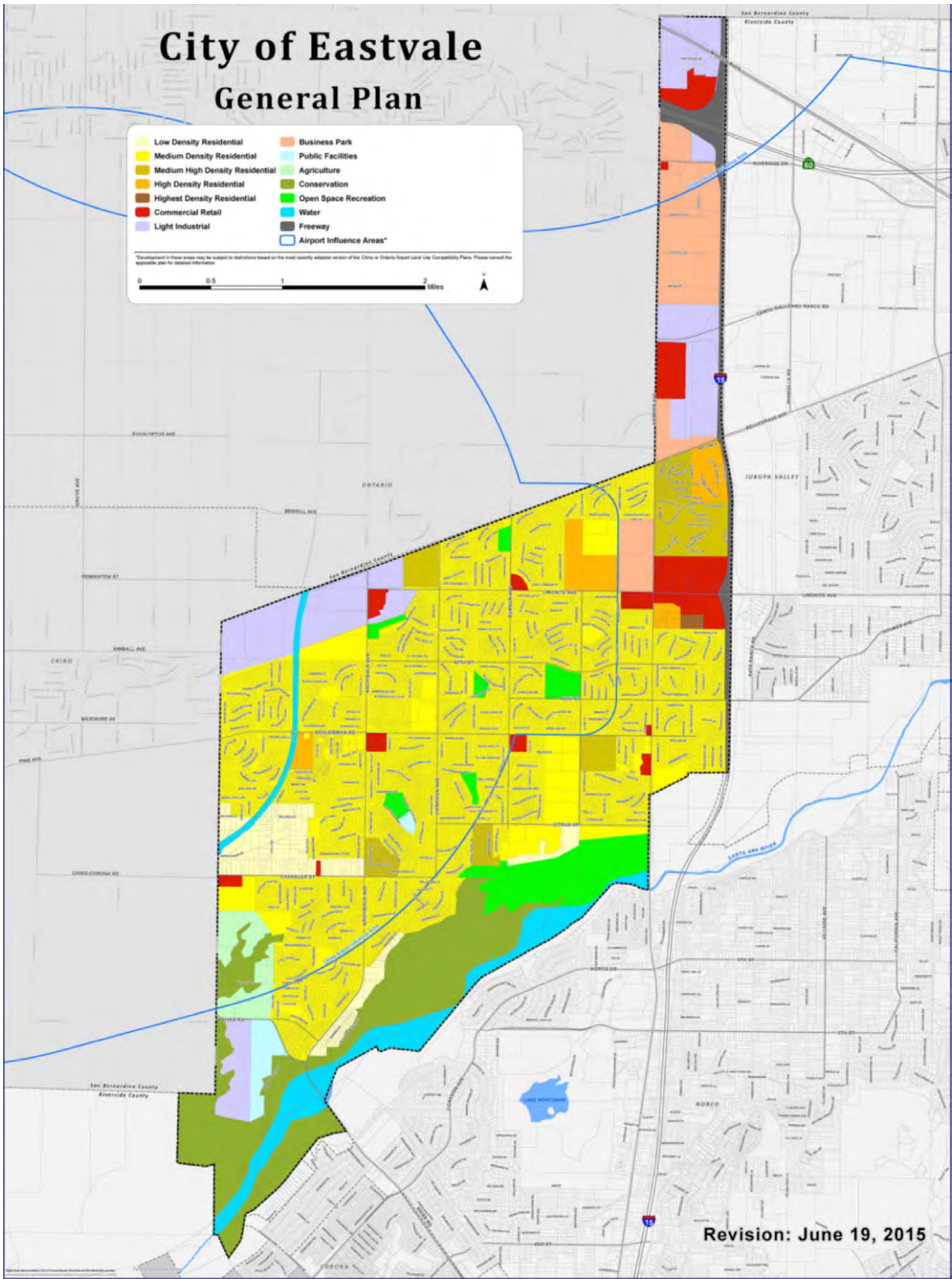
Federal

Federal Transportation Improvement Program

The proposed project, as currently scoped, is included in the Final 2019 FTIP Amendment 1 (Project ID: 20159901), which includes all federally funded and regionally significant projects.

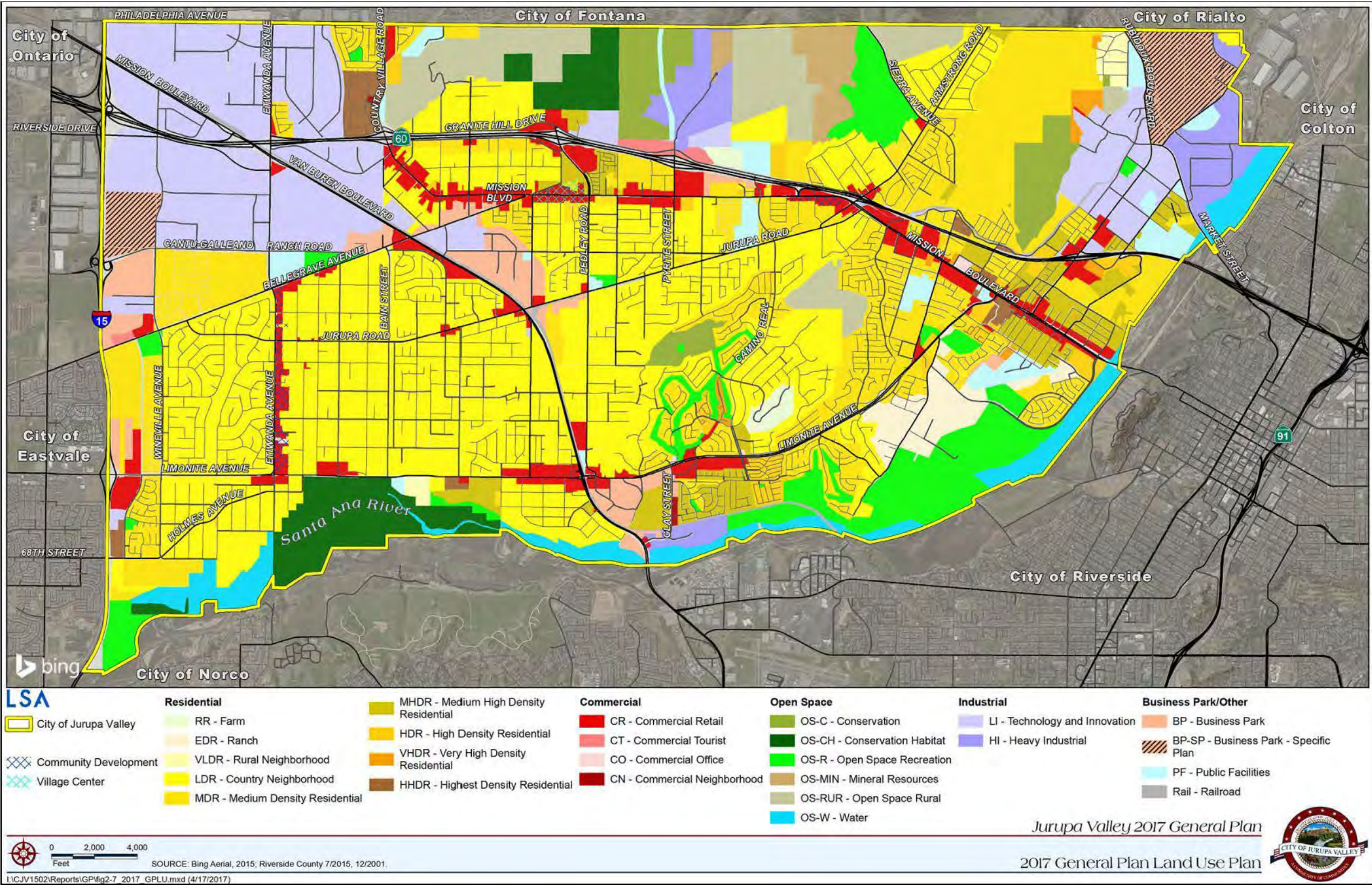
The proposed project is consistent with the most up-to-date FTIP project description.

Figure 2-2. Study Area Land Uses in the City of Eastvale



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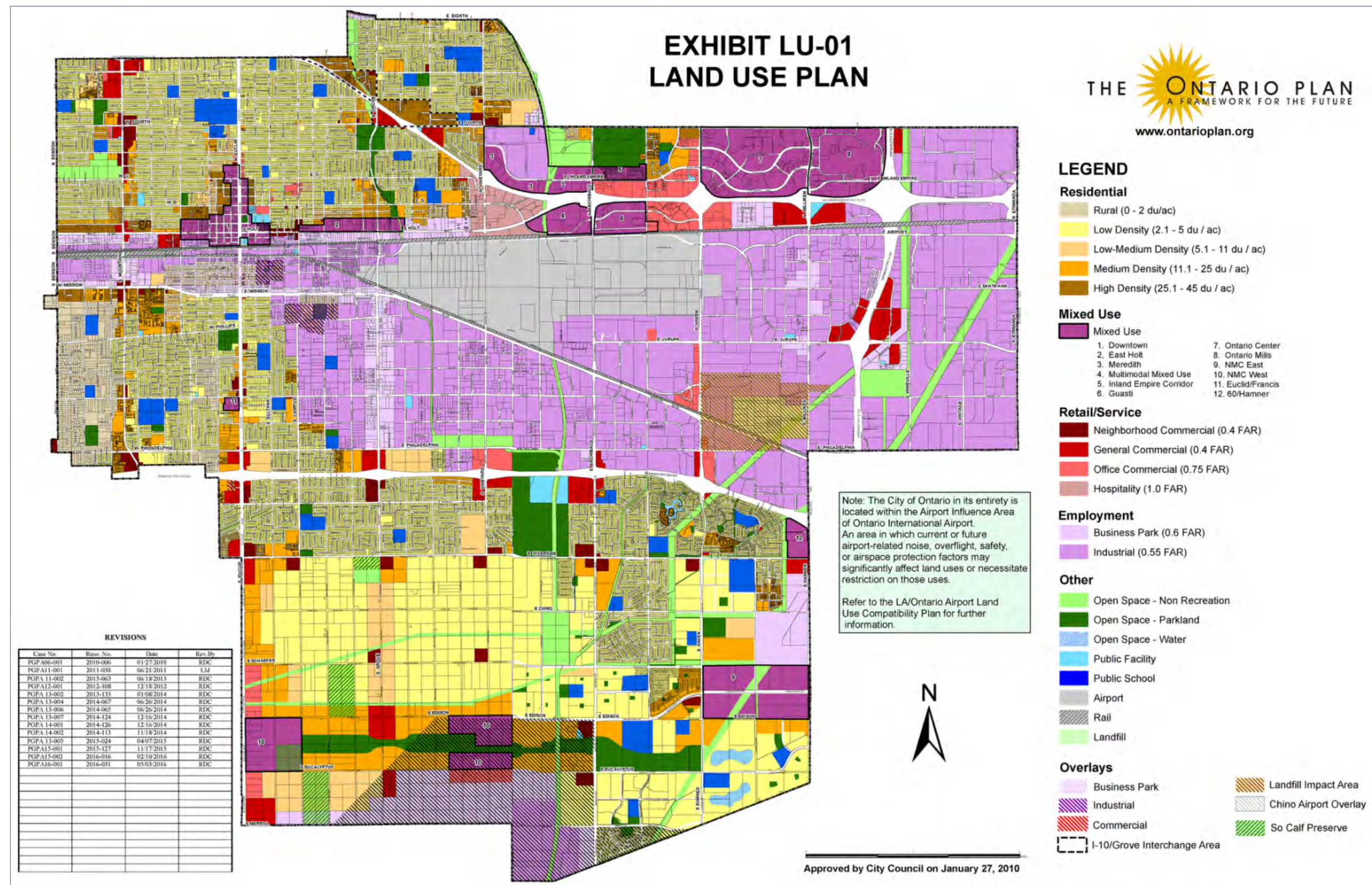
Figure 2-3. Study Area Land Uses in the City of Jurupa Valley



Note: The Jurupa Valley land use map is from the April 2017 Draft General Plan, as the final version approved by the City Council is being revised.

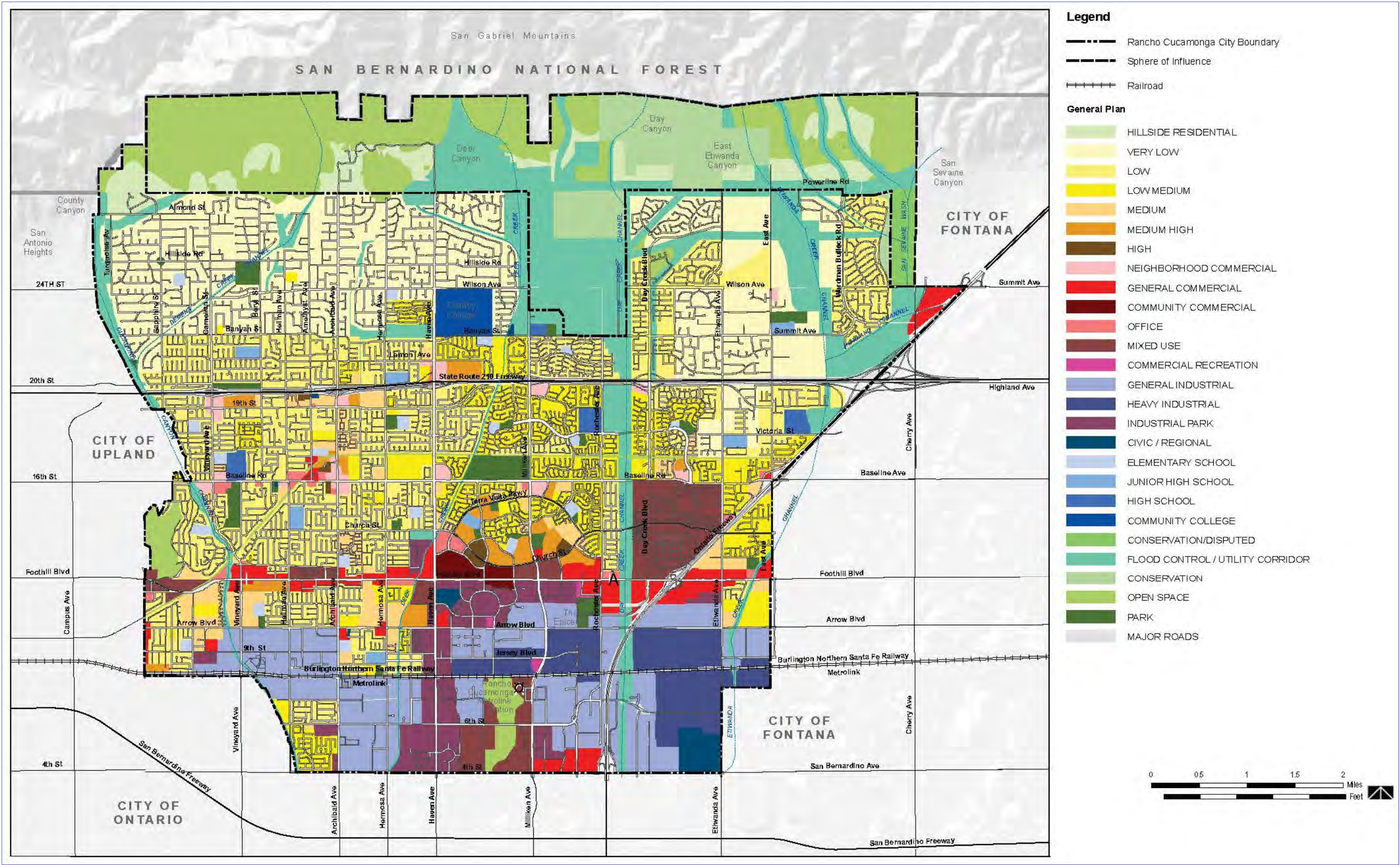
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Figure 2-4. Study Area Land Uses in the City of Ontario



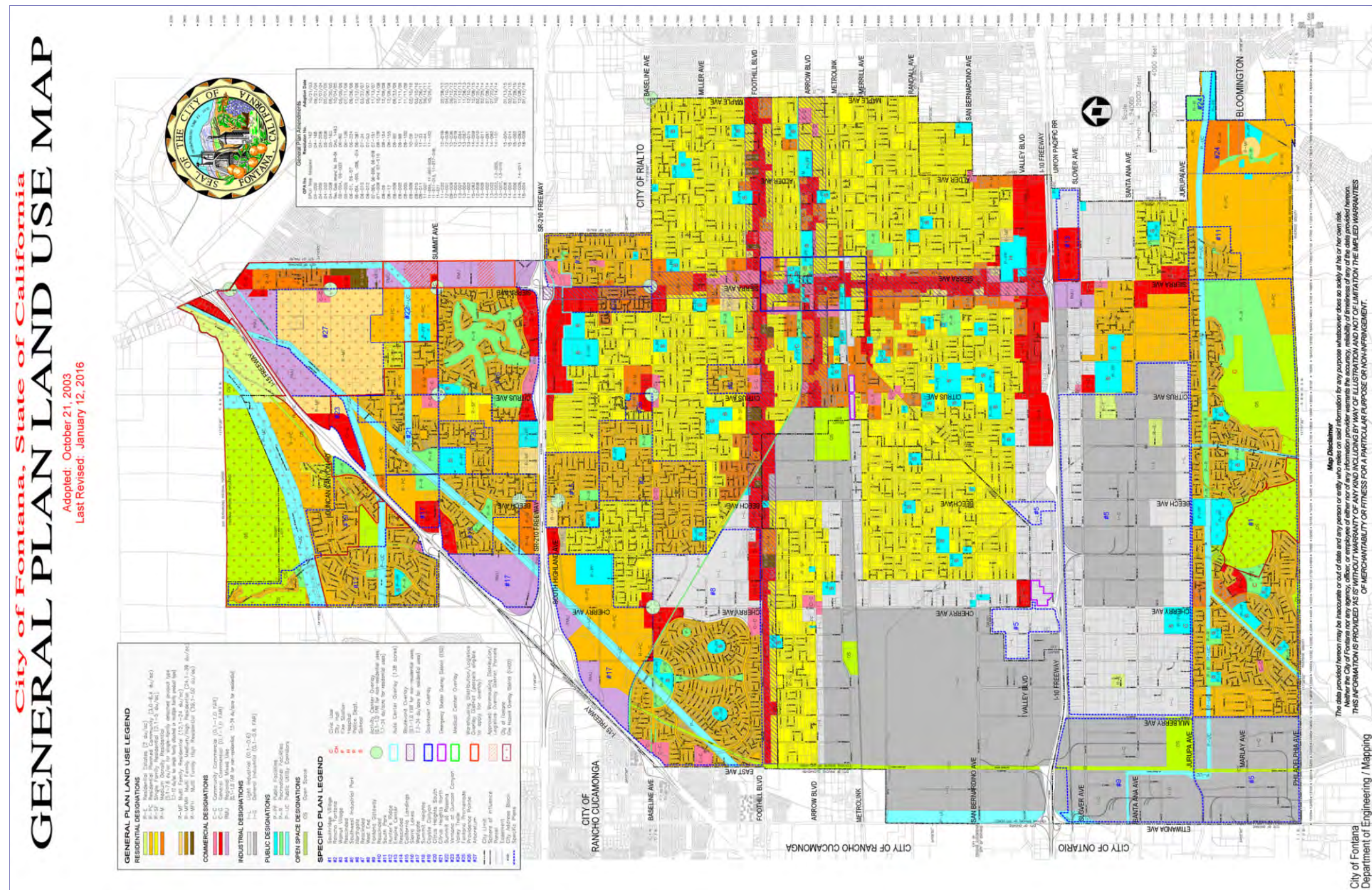
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Figure 2-5. Study Area Land Uses in the City of Rancho Cucamonga



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Figure 2-6. Study Area Land Uses in the City of Fontana



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Regional

Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

The proposed project is included in SCAG’s 2016–2040 RTP/SCS Amendment 1, which was approved by SCAG on October 1, 2018. With the approval of Amendment 2, the proposed project is consistent with the goals and policies of the latest RTP.

Riverside County Transportation Commission Full Speed Ahead 2009-2019 Delivery Plan

The RCTC’s Full Speed Ahead 2009–2019 Delivery Plan is a transportation system planning document that establishes a 10-year planning concept. As part of this concept, express lane improvements have been planned along the I-15 corridor within Riverside County. Construction of the RCTC’s I-15 corridor improvements are planned to begin in 2018. The proposed project would tie into the planned RCTC improvements to the south.

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive regional Habitat Conservation Plan that was adopted in 2004. Major participants in the regional planning effort included, but were not limited to, Caltrans, CDFW, the United States Fish and Wildlife Service (USFWS), Riverside County, RCTC, local jurisdictions, and interested individuals and groups. The purpose of the MSHCP is to develop methods and procedures that provide for development while protecting environmental resources in the western Riverside County area over a 75-year period. The southern portion of the project is located within Riverside County and within the boundaries of the MSHCP and Caltrans is the lead agency and responsible for consulting with USFWS and CDFW for MSHCP consistency review.

California Transportation Plan 2040

The California Transportation Plan (CTP) is a transportation planning document that provides a long-range policy framework to meet future mobility needs and reduce greenhouse gas emissions. It defines goals, performance-based policies, and strategies to achieve a vision for California’s future statewide, integrated, multimodal transportation system. The CTP aims to, among other things, improve transit, reduce long-run repair and maintenance costs, improve highways and roads, and improve communities. The proposed project would tie into goals of the CTP by improving transit and highways and roads.

Local

County of Riverside General Plan—Circulation Element

The Riverside County General Plan was adopted in October 2003. Since its adoption, 83 General Plan Amendments have been adopted by the Board of Supervisors through a series of resolutions as of December 2008. While baseline general plan documents were created in 2008, the 2008 Riverside County General Plan was never formally adopted. A comprehensive update to the county general plan is underway.

San Bernardino County General Plan—Circulation Element

The 2007 San Bernardino County General Plan, adopted in March 2007, provides land use rules and policies to unincorporated and privately owned lands in the county. It was amended in December 2011, May 2012, July 2013, and April 2014. The San Bernardino County General Plan contains policies for the overall county, as well as policies applicable only to the Valley, Mountain, and Desert Planning Regions. Only policies affecting the Valley Region are discussed in this section.

City of Eastvale General Plan—Circulation Element

The City of Eastvale General Plan was adopted in June 2012 and is a comprehensive visioning plan for the future of the city. Subsequent updates to the General Plan Land Use Map were completed and approved in July 2015.

City of Jurupa Valley General Plan

The City of Jurupa Valley General Plan was adopted by the City Council in September 7, 2017, and will be the primary tool to guide the development and character of Jurupa Valley for the next five to 10 years.

City of Ontario General Plan—Mobility

The City of Ontario adopted its general plan in January 2010. It was amended multiple times in subsequent years, with the most recent amendment adoption in March 2017.

Rancho Cucamonga General Plan—Circulation Element

The City of Rancho Cucamonga updated its general plan in May 2010. The updated general plan now includes a consideration of the regional transportation plans that emerged in the mid-2000's,

Fontana General Plan—Circulation Element

In October 2003, the City of Fontana adopted its most recent general plan, which is currently being updated. The general plan provides details of the community's vision by identifying goals and objectives over the next 10 to 20 years.

2.1.1.3 Environmental Consequences

No Build Alternative

Under the No Build Alternative, the proposed project improvements would not be carried out; therefore, no direct or indirect adverse impacts on land use plans or policies would occur as a result of the No Build Alternative. However, the No Build Alternative would not be consistent with all goals and policies identified in regional planning goals and policies, such as the 2016–2040 RTP/SCS.

Build Alternative

Temporary

The proposed project is anticipated to be constructed entirely within the existing I-15 right of way; therefore, acquisition of adjacent properties would not be required. Construction of the proposed project would not change the land use to conflict with any federal, regional, or local plans and policies.

Permanent

The proposed project is anticipated to be constructed and operated in the existing right of way; therefore, acquisition of adjacent properties would not be required. Implementation of the proposed project would not cut off connected neighborhoods or land uses from each other. No development features are proposed that would divide an established community or limit movement, travel, or social interaction between established land uses. No changes to existing land uses or land use designations would result from the project. Air pollution and noise effects are currently experienced by land uses adjacent to I-15.

While widening I-15 would result in impacts, such as general construction disruptions, increased air pollution from the addition of traffic lanes, and increased noise from traffic that would be closer to land uses adjacent to the highway, these impacts are not anticipated to be of a severity such that existing land uses would become incompatible with the proposed improvements. There would be no impacts related to land use compatibility or planning.

Table 2-2 identifies the federal, regional, and local programs, plans, and policies that would apply to the proposed project, and project consistency with these programs, plans, or policies. As shown in **Table 2-2**, the proposed project is consistent with all local and regional planning goals and policies that have been identified, specifically the RCTC County Highway Delivery Plan, SCAG 2019 FTIP Amendment 1, SCAG's 2016–2040 RTP/SCS Amendment 2, the Western Riverside MSHCP, and each of the cities' and counties' general plans. Goals and policies not included above are not applicable to the proposed project.

2.1.1.4 Avoidance, Minimization, and/or Mitigation Measures

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

Table 2-2. Consistency with Plans

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
Western Riverside County Multiple Species Habitat Conservation Plan		
MSHCP Requirements (Volume I, Sections 3.2.3, 6.1.2, 6.1.3, 6.1.4, 6.3.2, 7.5.1, 7.5.2, and 7.5.3, and Appendix C)	Consistent. Under the No-Build Alternative, no changes to the existing roadways would occur in the project area. There would be no change to the MSHCP.	Consistent. As documented in the December 2017 NES, Alternative 2 involves an existing facility and therefore is a Covered Activity within the MSHCP boundaries in the Eastvale and Jurupa Area Plans. A consistency review of the project with the MSHCP will be completed by USFWS and CDFW prior to PA&ED.
Riverside County General Plan – Circulation Element (C)		
<i>Policy C 1.1: Design the transportation system to respond to concentrations of population and employment activities.</i>	Inconsistent. Under the No-Build Alternative, no changes to the existing roadways would occur in the project area. There would be no response to concentrations of population and employment activities.	Consistent. Alternative 2 would reduce congestion, increase mainline capacity, and improve travel time in the corridor, in an effort to respond to concentrations of population and employment activities.
<i>Policy C 1.4: Utilize existing infrastructure and utilities to the maximum extent practicable, and provide for the logical, timely, and economically efficient extension of infrastructure and services.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Extensions of infrastructure would not be utilized to the maximum extent practicable.	Consistent. Alternative 2 would increase mainline capacity within the project area, which would result in a logical, timely, and economically efficient extension of infrastructure.
<i>Policy C 1.5: Evaluate the planned circulation system as needed to enhance the arterial highway network and respond to anticipated growth and mobility needs.</i>	Inconsistent. Under the No-Build Alternative, no changes to the existing roadways would occur in the project area. There would be no response to anticipated growth and mobility needs.	Consistent. Alternative 2 would enhance the arterial highway network by increasing the mainline capacity of a portion of I-15. This would help respond to anticipated growth and mobility needs.
<i>Policy C 1.6: Cooperate with local, regional, state, and federal agencies to establish an efficient circulation system.</i>	Consistent. The No-Build Alternative would not prevent cooperation between Riverside County officials and local, regional, state, and federal agencies.	Consistent. Alternative 2 involves coordination between local, regional, state, and federal agencies to establish a more efficient circulation system.
<i>Policy C 7.3: Incorporate the RTP, the Riverside County Congestion Management Program, and the Riverside County Short- and Long-Range Transit Plans into the Circulation Element, and encourage the active participation of Caltrans in the design of state highway capital improvement projects.</i>	Consistent. The No-Build Alternative would prevent neither incorporation of the RTP, the Riverside County Congestion Program, and the Riverside County Short- and Long-Range Transit Plan into the Circulation Element nor active participation of Caltrans in the design of state highway capital improvement programs.	Consistent. Alternative 2 would incorporate the RTP, the Riverside County Congestion Program, and the Riverside County Short- and Long-Range Transit Plan. Alternative 2 involves active participation from Caltrans.

Table 2-2. Consistency with Plans (continued)

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
<i>Policy C 7.4: Coordinate with transportation planning, programming, and implementation agencies, such as Caltrans, the Riverside County Transportation Commission, Western Riverside Council of Governments, Coachella Valley Association of Governments, and the cities of Riverside County, on various studies related to freeway high-occupancy vehicle/high-occupancy toll lanes and transportation corridor planning, construction, and improvement in order to facilitate planning and implementation of an integrated circulation system.</i>	Consistent. The No-Build Alternative would not prevent coordination with any relevant agency.	Consistent. Under Alternative 2, coordination between Riverside County officials and appropriate agencies, such as Caltrans and the RCTC, would occur.
<i>Policy C 20.9: Implement the Circulation Plan in a manner consistent with federal, state, and local environmental quality standards and regulations.</i>	Consistent. The No-Build Alternative would not prevent implementation of the Circulation Plan in a manner consistent with federal, state, and local environmental quality standards and regulations.	Consistent. Alternative 2 would not prevent implementation of the Circulation Plan in a manner consistent with federal, state, and local environmental quality standards and regulations.
Riverside County General Plan – Land Use Element (LU)		
<i>Policy LU 1.5: The County shall participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, and watershed and habitat management with cities, local and regional agencies, stakeholders, Indian nations, and surrounding jurisdictions.</i>	Inconsistent. Under the No-Build Alternative, no changes to the existing roadways would occur in the project area. This would be an instance of not participating in regional efforts to address issues of mobility, transportation, traffic congestion, and economic development.	Consistent. Alternative 2 would reduce congestion, increase mainline capacity, and improve travel time within the corridor, which would support regional efforts to address issues of mobility, transportation, traffic congestion, and economic development.
<i>Policy LU 6.4: Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.</i>	Consistent. Under the No-Build Alternative, no changes to the existing roadways would occur in the project area. Therefore, no encroachment would occur.	Consistent. Alternative 2 would not require right of way acquisitions; the project would be built entirely within an existing right of way. Therefore, no encroachment would occur.
<i>Policy LU 12.7: Review projects for consistency with the County's Transportation Demand Ordinance.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, project review is not applicable.	Consistent. Alternative 2 would be consistent with the County's Transportation Demand Ordinance.

Table 2-2. Consistency with Plans (continued)

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
<i>Policy LU 20.1: Require that structures be designed to maintain the environmental character in which they are located.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, no new structures would be created.	Consistent. Under Alternative 2, improvements would occur within an existing, developed transportation corridor. Therefore, Alternative 2 project components would maintain the environmental character in which they would be located.
San Bernardino County General Plan – Land Use (LU)		
<i>Policy LU 1.2: The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, analysis of new development is not applicable.	Consistent. Under Alternative 2, improvements would occur within an existing, developed transportation corridor. Therefore, Alternative 2 project components would be compatible with adjacent land uses and community character.
San Bernardino County General Plan – Circulation and Infrastructure (CI)		
<i>Policy CI 2.1: Work with adjacent jurisdictions to minimize inconsistencies in the existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries.</i>	Consistent. The No-Build Alternative would not prevent minimizing inconsistencies in the existing and ultimate right of way and roadway capacity across jurisdictional boundaries.	Consistent. Alternative 2 would not prevent minimizing inconsistencies in the existing and ultimate right of way and roadway capacity across jurisdictional boundaries.
<i>Policy CI 2.4: Work with the California Department of Transportation (Caltrans) and the San Bernardino Associated Governments on appropriate fair-share mitigation for impacts of development on state highways.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, mitigation for impacts would not be required.	Consistent. Under Alternative 2, Caltrans and San Bernardino Associated Governments will collaborate on mitigation measures that will be applicable to project impacts.
<i>Policy CI 4.3: Development reviews and approvals for proposals affecting state and/or federal roadways shall reflect input from Caltrans and other local and regional transportation agencies to ensure transportation system improvements are implemented in locations where facilities are approaching or exceed capacity.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, development reviews or approvals are not applicable.	Consistent. Alternative 2 would not prevent San Bernardino County officials from using input from Caltrans and other local and regional transportation agencies during their development reviews and approvals. It is expected that San Bernardino County officials would do so.
<i>Policy CI 5.1: Implement appropriate design standards for all types of highways, as shown in Chapter 83.23 of the Development Code.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, no designs would be created.	Consistent. Alternative 2 would comply with appropriate design standards, as shown in Chapter 83.23 of the Development Code.

Table 2-2. Consistency with Plans (continued)

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
<i>Policy CI 5.2: Protect and increase the designed roadway capacity of all vehicular thoroughfares and highways.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, it would not increase the designed roadway capacity of an existing vehicular highway.	Consistent. Alternative 2 would increase the mainline capacity of a portion of I-15.
City of Eastvale General Plan – Land Use (LU)		
<i>Policy LU-9: The City will participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, and watershed and habitat management with cities, local and regional agencies, stakeholders, and surrounding jurisdictions.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. This would be an instance of not participating in regional efforts to address issues of mobility, transportation, traffic congestion, and economic development.	Consistent. Alternative 2 would reduce congestion, increase mainline capacity, and improve travel time within the corridor, which would support regional efforts to address issues of mobility, transportation, traffic congestion, and economic development.
<i>Policy LU-31: The City will work with other agencies to coordinate development with supporting infrastructure and services, such as water and sewer service, libraries, parks and recreational facilities, transportation systems, and fire/police/medical services.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. This would be an instance of not participating in efforts of other agencies in development of infrastructure.	Consistent. Alternative 2 would involve coordinating with other agencies in the development of transportation systems.
<i>Policy LU-36: The City shall require that new public facilities protect sensitive uses, such as schools and residences, from the impacts of noise, light spillover, fumes, odors, vehicular traffic, parking, and operational hazards.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. No new public facilities would be created.	Consistent. Under Alternative 2, improvements would be made within the existing transportation right-of-way. Therefore, conditions related to noise, light spillover, fumes, odors, vehicular traffic, parking, and operational hazards would be very similar to existing conditions and would not result in a new significant impact.
City of Jurupa Valley General Plan – Circulation		
<i>JURAP 13.3 Consider the following regional and community-wide transportation options when developing transportation improvements in Jurupa Valley: b. Support the development of regional transportation facilities and services (such as high-occupancy vehicle lanes, express bus service, and fixed transit facilities), which will encourage the use of public transportation and ridesharing for longer distance trips.</i>	Consistent. The No-Build Alternative would not prevent consideration of the regional and community-wide transportation options detailed in JURAP 13.3.	Consistent. Alternative 2 would reduce congestion, increase mainline capacity, and improve travel times within the corridor, which would enhance regional transportation facilities.

Table 2-2. Consistency with Plans (continued)

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
City of Ontario General Plan – Mobility (M)		
<i>Policy M4-2: Regional Participation. We work with regional and subregional transportation agencies to plan and implement goods movement strategies, including those that improve mobility, deliver goods efficiently, and minimize negative environmental impacts.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. This would be an instance of not participating with regional and subregional transportation agencies in planning and implementing goods movement strategies.	Consistent. Alternative 2 would reduce congestion, increase mainline capacity, and improve travel time within the corridor, which would support regional and subregional transportation agencies' efforts in planning and implementing goods movement strategies.
City of Ontario General Plan – Land Use (LU)		
<i>Policy LU2-6: Infrastructure Compatibility. We require infrastructure to be aesthetically pleasing and in context with the community character.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. Therefore, no changes in aesthetics would occur.	Consistent. Under Alternative 2, improvements would occur within an existing, developed transportation corridor. Therefore, Alternative 2 project components would result in a negligible aesthetic change.
City of Ontario General Plan – Community Design (CD)		
<i>Policy CD1-4: Transportation Corridors. We will enhance our major transportation corridors within the city through landscape, hardscape, signage and lighting.</i>	Consistent. The No-Build Alternative would not prevent the enhancement of major transportation corridors within the city through landscape, hardscape, signage, and lighting.	Consistent. Under Alternative 2, a major transportation corridor would be enhanced with new signage and lighting.
City of Ontario General Plan – Mobility (M)		
<i>Policy M5-2: Land Use Compatibility with Regional Transportation Facilities. We work with Los Angeles World Airports, railroads, Caltrans, SBCTA, and other transportation agencies to minimize impacts.</i>	Consistent. The No-Build Alternative would not prevent City of Ontario officials from working with officials of any transportation agency.	Consistent. Alternative 2 requires cooperation between the City of Ontario, Caltrans, SBCTA, and other transportation agencies.
City of Ontario General Plan – Safety (S)		
<i>Policy S4-5: Roadway Design. We design streets and highways to minimize noise impacts.</i>	Consistent. The No-Build Alternative would not prevent City of Ontario officials from designing streets and highways to minimize noise impacts.	Consistent. Alternative 2 would be designed to minimize noise impacts; appropriate noise attenuation measures such as soundwalls are under consideration in areas where substantial noise impacts are anticipated.
City of Rancho Cucamonga General Plan – Community Mobility (CM)		
<i>Policy CM-1.3: Complete the circulation system by constructing new roadway facilities and freeway interchanges, pursuant to the Circulation Plan.</i>	Consistent. The No-Build Alternative would not prevent the construction of new roadway facilities and freeway interchanges, pursuant to the Circulation Plan.	Consistent. Alternative 2 would not prevent the construction of new roadway facilities and freeway interchanges, pursuant to the Circulation Plan.

Table 2-2. Consistency with Plans (continued)

Policy	Alternative 1—No-Build Alternative	Alternative 2—Build Alternative
<i>Policy CM-6.1: Actively pursue federal, state, and regional funds for local and regional roadway improvements.</i>	Consistent. The No-Build Alternative would not prevent the pursuit of federal, state, and regional funds for local and regional roadway improvements.	Consistent. Alternative 2 would not prevent the pursuit of federal, state, and regional funds for local and regional roadway improvements.
<i>Policy CM-6.2: Support appropriate regional plans for high-occupancy vehicle lanes, bus rapid transit and express bus, rail transit, and high-speed rail, provided it does not negatively affect the city.</i>	Inconsistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. This would be an instance of not participating in regional plans for a HOV lanes.	Consistent. Alternative 2 would support regional plans for HOV lanes.
<i>Policy CM-6.5: Consult with Caltrans, SCAG, the South Coast Air Quality Management District, SBCTA, OmniTrans, San Bernardino County, and the cities of Upland, Fontana, Ontario, and Montclair to coordinate regional transportation facilities and pursue federal, state, and regional funds for local and regional traffic improvements.</i>	Consistent. The No-Build Alternative would not prevent consultation with any of the identified agencies or the pursuit of federal, state, and regional funds for local and regional roadway improvements.	Consistent. Under Alternative 2, consultation between Ranch Cucamonga officials and Caltrans, SCAG, the South Coast Air Quality Management District, SBCTA, and the cities of Fontana and Ontario would occur. Alternative 2 is also a listed project in the 2019 FTIP Amendment 1 for SCAG. This is an example of pursuing regional funds.
City of Fontana General Plan – Land Use (LU)		
<i>Policy LU 2.2: Regionally beneficial land uses such as transportation corridors, flood control systems, utility corridors, and recreational corridors shall be sensitively integrated into our community.</i>	Consistent. Under the No-Build Alternative, no changes to existing roadways would occur in the project area. No integration of any new components would occur.	Consistent. Under Alternative 2, improvements would occur within an existing, developed transportation corridor. Therefore, Alternative 2 project components would be integrated into the community to be compatible with the existing setting.
<i>Policy LU 3.3: Circulation system improvements shall continue to be pursued that facilitate connectivity across freeway and rail corridors.</i>	Inconsistent. Under the No-Build Alternative, no improvements to the circulation system would occur.	Consistent. Alternative 2 would increase mainline capacity and reduce congestion on portions of I-15, which would constitute an improvement to the circulation system.
<i>Policy LU 3.4: Improvements shall be made to transportation corridors that promote physical connectivity and reflect consistently high aesthetic values.</i>	Inconsistent. Under the No-Build Alternative, no improvements to a transportation corridor that would promote physical connectivity would occur.	Consistent. Alternative 2 would increase mainline capacity and reduce congestion on portions of I-15, which would constitute an improvement to a transportation corridor that would promote physical connectivity. In addition, improvements would occur within an existing, developed transportation corridor. Therefore, Alternative 2 project components would not result in significant aesthetic impacts.

2.1.2 Parks and Recreational Facilities

Information used in this section is based on the October 2017 *Community Impact Assessment*.

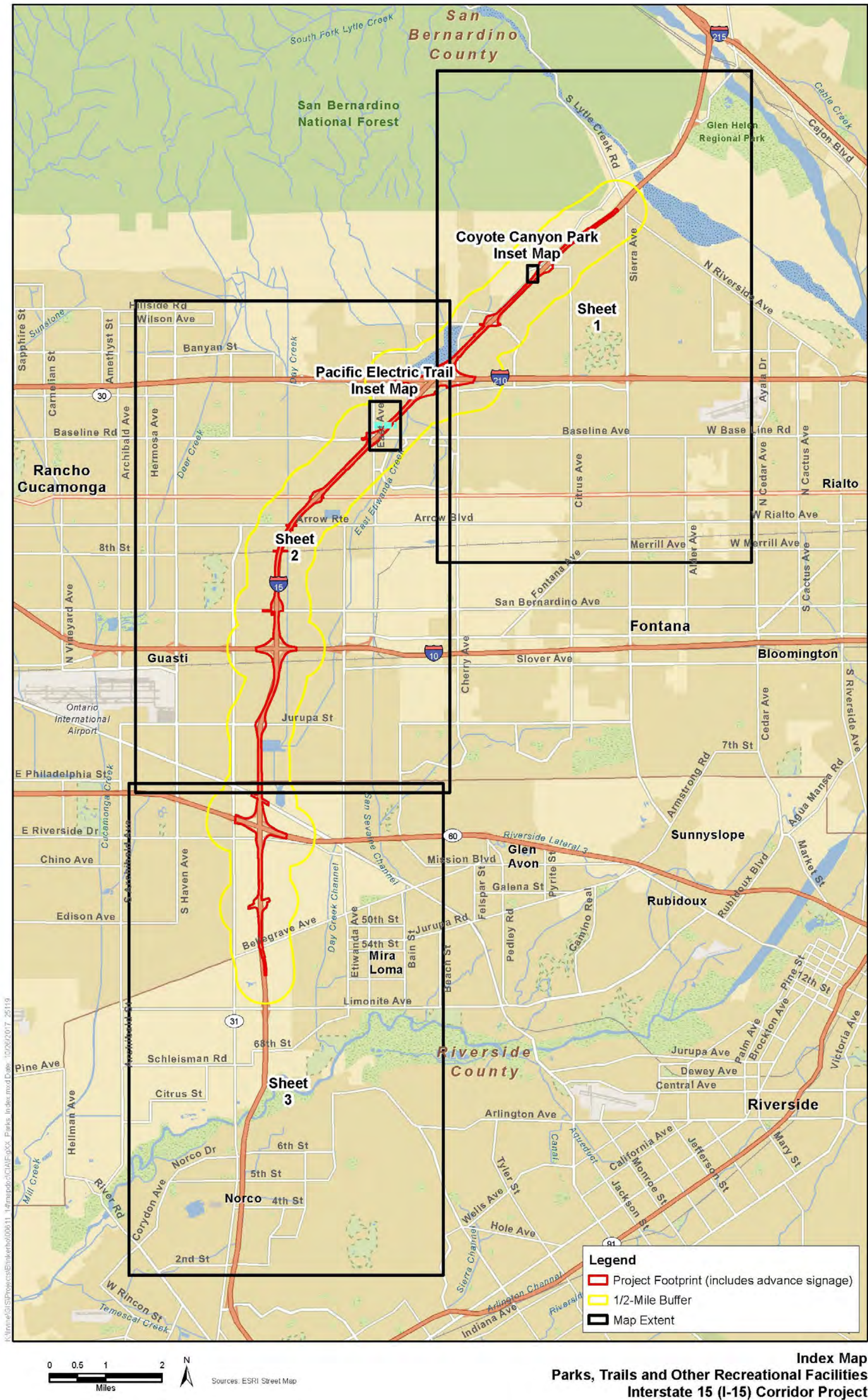
2.1.2.1 Regulatory Setting

This project would affect facilities that are protected by the Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409). 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. With exception to the Pacific Electric Trail, discussed below, all of the parks and recreational facilities identified within the study area are protected under the Park Preservation Act of 1971.

2.1.2.2 Affected Environment

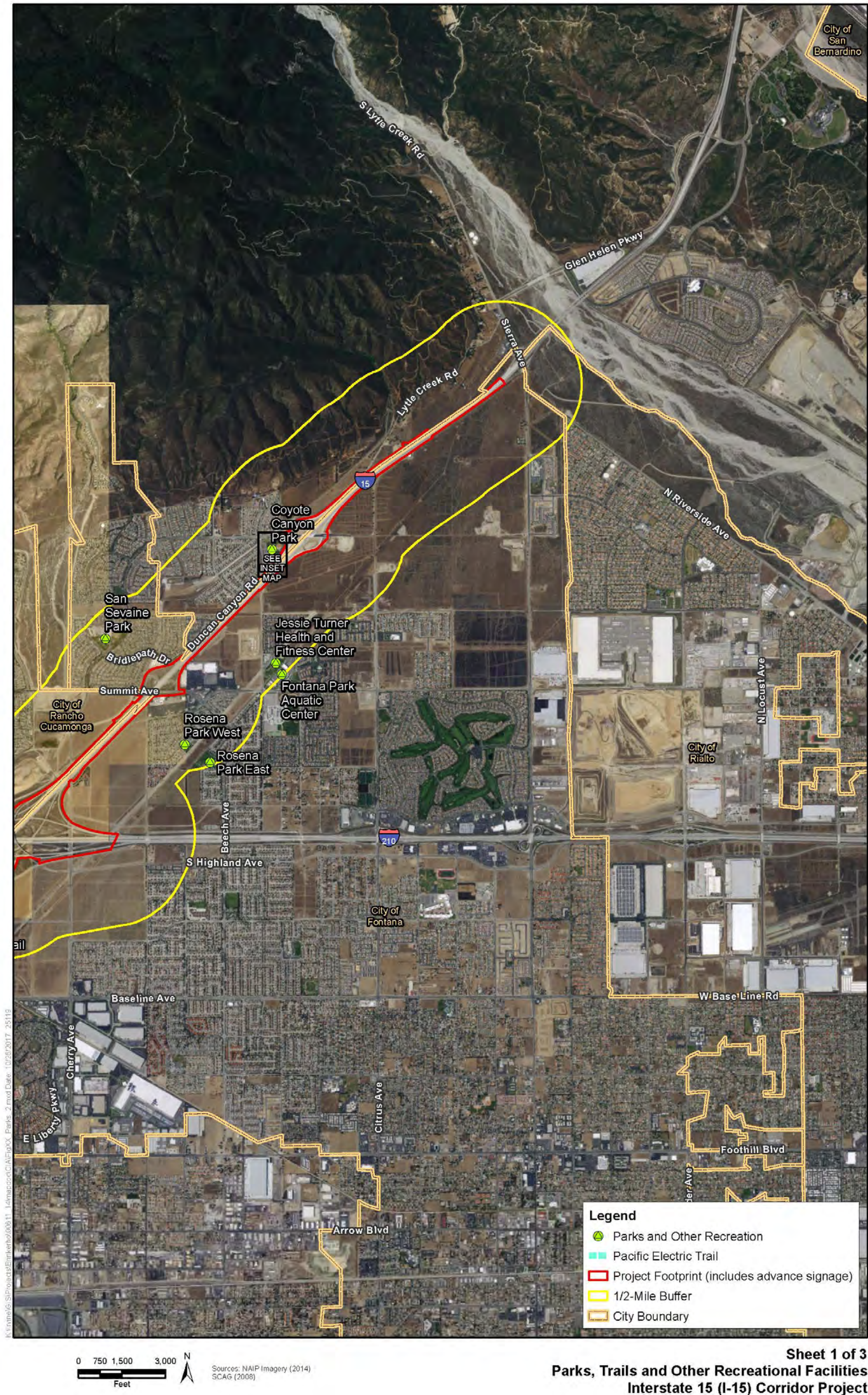
Public parks, trails, and other recreational facilities that were identified in the CIA as being located within 0.5 mile of the project limits are presented in **Figure 2-7** and described in **Table 2-3**.

Figure 2-7. Public Parks, Trails, and Other Recreational Facilities
Sheet 1



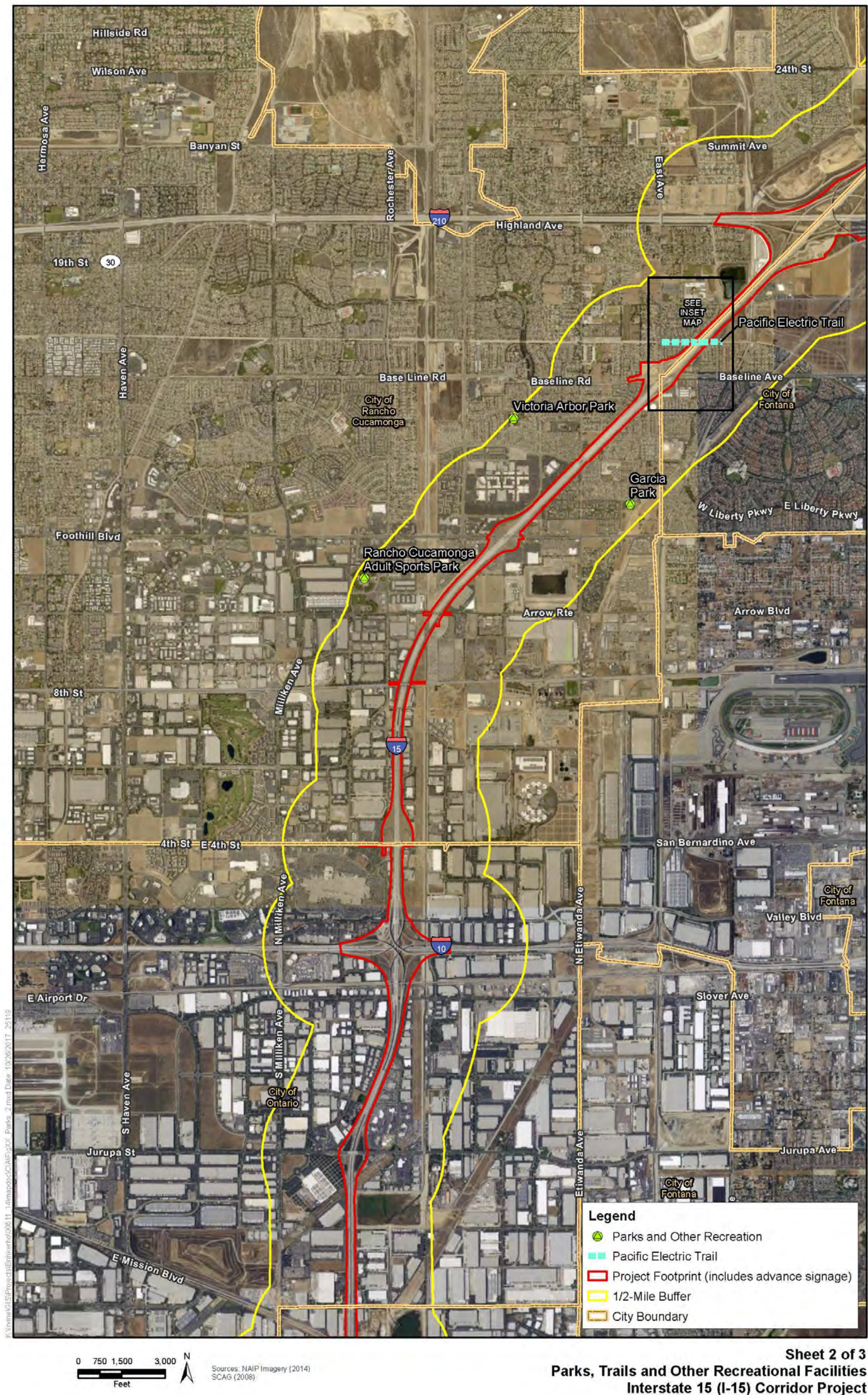
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Figure 2-7. Public Parks, Trails, and Other Recreational Facilities
Sheet 2



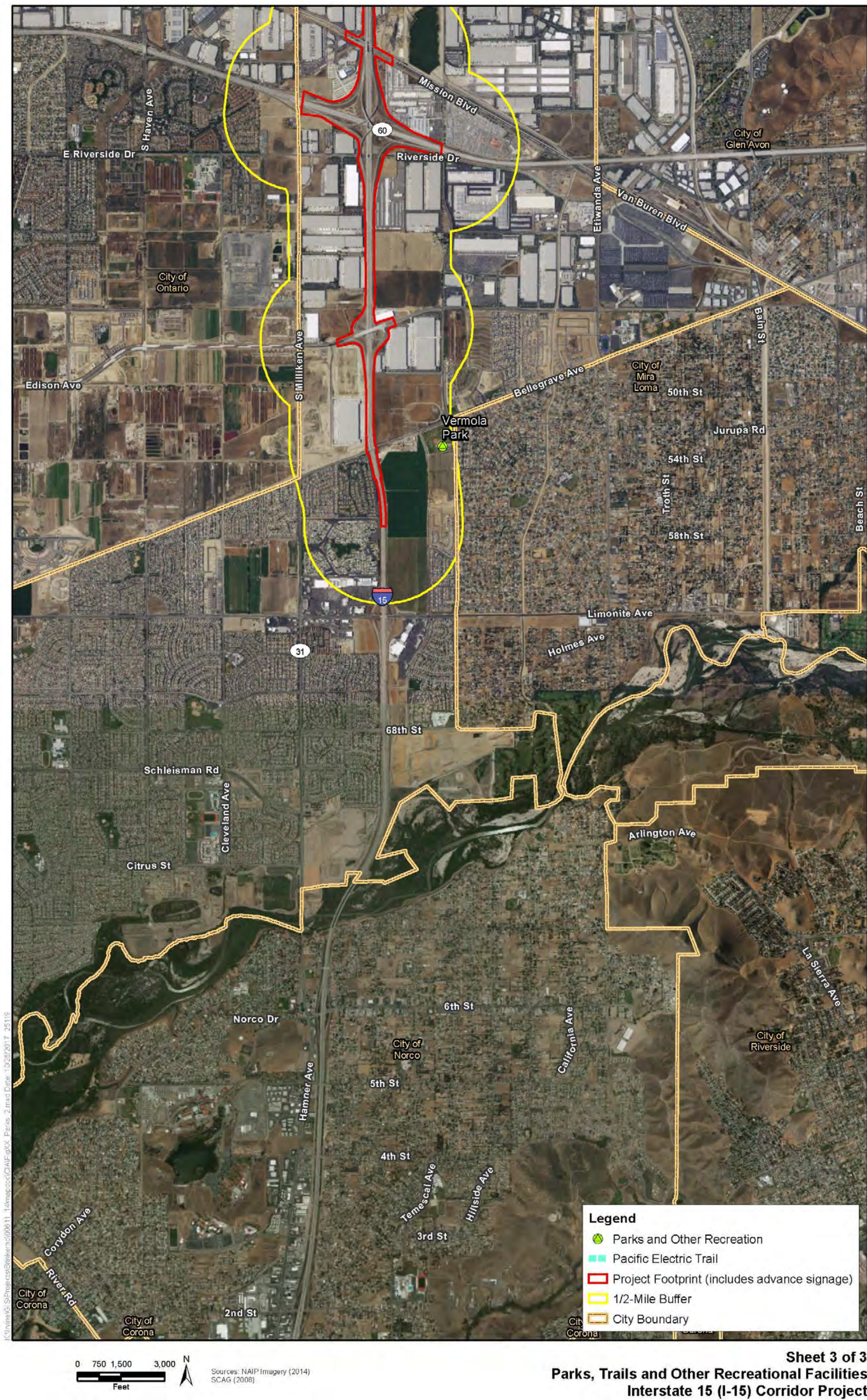
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Figure 2-7. Public Parks, Trails, and Other Recreational Facilities
Sheet 3



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Figure 2-7. Public Parks, Trails, and Other Recreational Facilities
Sheet 4



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Table 2-3. Parks, Trails, and Other Recreational Facilities Within 0.5 mile of the Project Limits

Jurisdiction	Name	Location	Distance from Freeway/ Express Lanes	Amenities
Jurupa Area Recreation and Park District	Vermola Park	5211 Wineville Avenue, Jurupa Valley	0.3 mile	Facilities include a playground, grassy areas, picnic tables, ball fields, outdoor basketball courts, restrooms, and a picnic shelter.
City of Rancho Cucamonga	Garcia Park	13150 Garcia Drive, Rancho Cucamonga	0.4 mile	Facilities include picnic tables and shelters, a playground, a basketball court, a baseball field, an exercise course, and restrooms.
	Victoria Arbor Park	7429 Arbor Ln, Rancho Cucamonga	0.5 mile	Facilities include picnic tables, barbecues, a shelter, playground, basketball court, softball field, an exercise course, and restrooms.
	Rancho Cucamonga Adult Sports Park	8408 Rochester Avenue, Rancho Cucamonga	0.5	Facilities include a baseball stadium, Goals Soccer Center, three softball fields, a Little League field, an open-air plaza, and covered pavilions.
	Pacific Electric Trail	North of the I-15/Baseline Road Interchange	Crosses under I-15 (approaches I-15 from the west)	Facility consists of a paved recreational bicycle and walking trail along the old Pacific Electric rail corridor.
City of Fontana	San Sevaine Park	5355 Cherry Avenue, Fontana	0.4 mile	Facilities include barbecue areas, a basketball court, picnic tables, a playground, tennis courts, restrooms, and a volleyball court.
	Pacific Electric Trail	North of the I-15/Baseline Road Interchange	Crosses under I-15 (approaches I-15 from the east)	Facility consists of a paved recreational bicycle and walking trail along the old Pacific Electric rail corridor.
	Rosena Park West	15057 Grays Peak, Fontana	0.4 mile	Facilities include picnic tables, a playground, bocce/horseshoes, and restrooms.
	Rosena Park East	15299 Curtis Avenue, Fontana	0.5 mile	Facilities include bocce/horseshoe areas, picnic tables, a playground, and restrooms.
	Coyote Canyon Park	5065 Coyote Canyon Road, Fontana	0 feet	Facilities include softball fields, barbecue areas, picnic shelters and tables, a playground, restrooms, and a snack bar.
	Jessie Turner Health and Fitness Center	15556 Summit Avenue, Fontana	0.5 mile	Facilities include a basketball court, a fitness room, and restrooms.
	Fontana Park Aquatic Center	15610 Summit Avenue, Fontana	0.5 mile	Facilities include picnic tables, a pool, and restrooms.

2.1.2.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not result in any adverse temporary or permanent effects on parks, recreational facilities, and trails.

Build Alternative

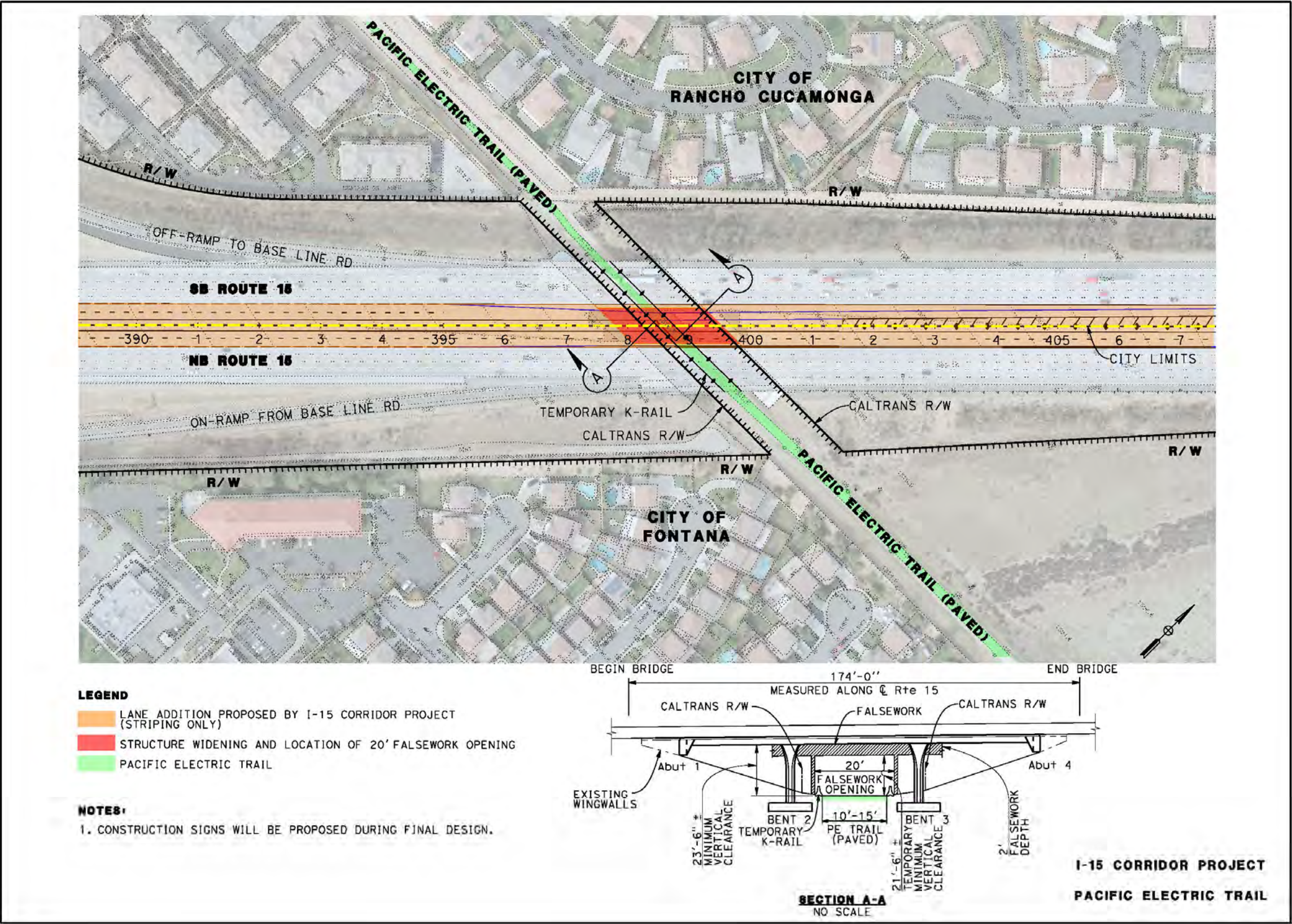
Temporary

As shown in **Table 2-3**, there are park and recreational resources within 0.5 mile of the proposed project. The project, however, would be constructed entirely within the existing I-15 right of way, with the exception of temporary construction easements for the Pacific Electric Trail. Access to parks and recreation facilities would be maintained at all times during proposed project construction with one exception. The existing I-15 crosses over the Pacific Electric Trail on two bridge structures (on NB and one SB structure) known as the Etiwanda Overhead, and the Build Alternative proposes closing the gap between these structures to allow for a wider roadway which would accommodate the proposed Express Lanes. To construct this facility falsework would be erected around the Pacific Electric Trail which would allow the trail to remain open throughout most of the construction of the Etiwanda Overhead. However, the Pacific Electric Trail would require limited closure for the period of time required to erect falsework below the Etiwanda Overhead. The construction of the falsework would be restricted to nighttime hours when trail use is least active to ensure the least possible disruption to trail use. It is anticipated that these nighttime closures would occur over the course of a three-week period required to install the falsework. Additionally, removal of falsework at the conclusion of the Etiwanda Overhead construction would similarly require nighttime closure of the Pacific Electric Trail for an additional three-week period. (**Figure 2-8**)

Construction work would occur along I-15 in the vicinity of Coyote Canyon Park in the City of Fontana. Typical construction related disruptions along nearby roadways (e.g., Duncan Canyon Road and Coyote Canyon Road) related to traffic back-up due to lane closures along I-15 are anticipated, but would be minor. To ensure that no obstruction of access to Coyote Canyon Park would occur an avoidance measure related to maintaining access is proposed and described below. (**Figure 2-9**)

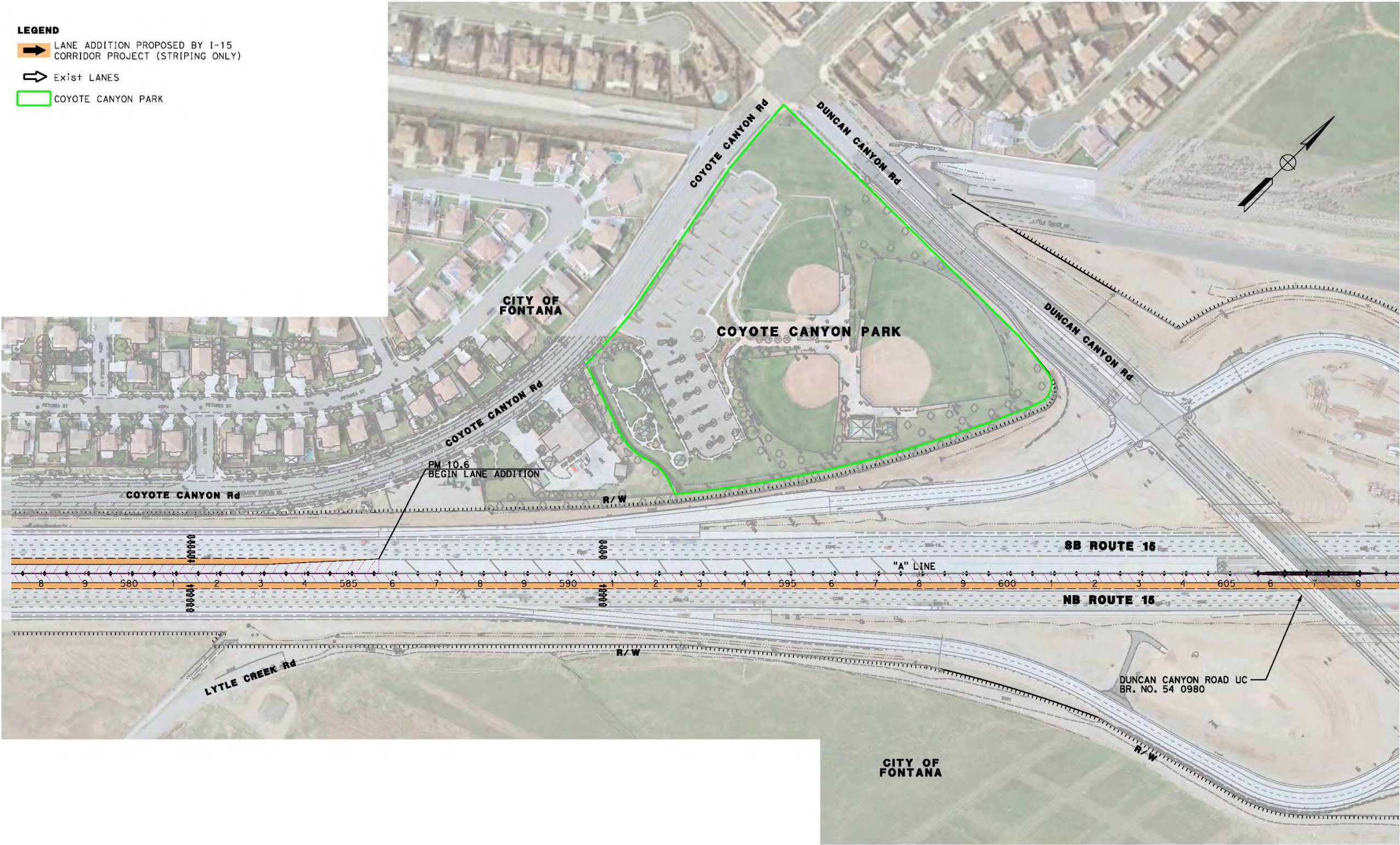
Implementation of the proposed project would not result in temporary impacts on parks, recreational facilities and temporary impacts posed by construction activities around the Pacific Electric Trail would be minimized by impact minimization measures as discussed in the coordination with the cities of Rancho Cucamonga and Fontana, included in Appendix A of this document.

Figure 2-8. Pacific Electric Trail



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Figure 2-9. Coyote Canyon Park



**I-15 CORRIDOR PROJECT
COYOTE CANYON PARK**

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Permanent

No parkland or other recreational facilities would be permanently impacted by the proposed project due to property acquisition. Operation of the completed roadway sections is not anticipated to have any impacts on parks or recreational facilities. The closest park to the project is Coyote Canyon Park (50 feet from the I-15 right of way). Implementation of the proposed project would not result in permanent impacts on parks, recreational facilities, and trails.

2.1.2.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.1.3 Growth

2.1.3.1 Regulatory Setting

The Council on Environmental Quality (CEQ), 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..."

First-Cut Screening

The Department, in conjunction with FHWA and the U.S. Environmental Protection Agency, (U.S. EPA), developed a guidance document titled Guidance for Preparers of Growth-Related, Indirect Impact Analyses (May 2006). The following information is based on that guidance.

The first step in determining the likely growth potential for a roadway improvement project is to perform a "first-cut screening," which focuses on answering the following questions:

- How, if at all, does the project potentially change accessibility?
- How, if at all, do the project type, project location, and growth-pressure potentially influence growth?
- Is project-related growth reasonably foreseeable as defined by NEPA?
- If there is project-related growth, how, if at all, will that impact resources of concern?

2.1.3.2 Affected Environment

Information used in this section is based on the October 2017 *Community Impact Assessment*.

Regional Setting

The population of the counties of Riverside and San Bernardino have increased substantially since 2010 and are expected to continue this growth trend through 2040. Population growth projections developed for SCAG's 2016–2040 RTP/SCS indicate that population in these two counties is expected to increase by approximately 975,784 and 692,550, respectively, between 2010 and 2040.

Population growth is an important factor in determining future travel demand. Increases in population, housing, and employment, as projected by SCAG in the 2016–2040 RTP/SCS, result in greater demand for transportation facilities and services. According to the 2016–2040 RTP/SCS, increased travel demand results in congestion on roadways if capacity does not keep up with the demand. I-15 from SR-60 to SR-210 has been identified as a corridor that needs additional capacity to address existing and projected demands from the population growth and development that is currently taking place in communities along the I-15 corridor, and that is expected to continue.

The County of Riverside General Plan provides the following:

In the last decade, the region's number of trips and amount of travel has grown at a much faster rate than the population growth. Transportation Demand Management (TDM) strategies are designed to counter this trend. The region cannot build its way out of congestion; it has neither the financial resources nor the willingness to bear the environmental impacts of such a strategy. TDM is one of the many approaches that will be used to maintain mobility and access as the region continues to grow and prosper. (County of Riverside 2008.)

Similarly, the San Bernardino County General Plan indicates that continued population growth is forecasted for San Bernardino County for the current and future decades.

The proposed project may result in a change in travel patterns for some drivers in the area, as a result of choices made to use I-15 once capacity is increased with the addition of the TEL, because of the reliable savings in travel time expected to be achieved. However, the proposed project itself would not cause development to occur in the region. There is a variety of existing and planned land uses within the project area, including general types such as residential, commercial, industrial, mixed-use, and open space. The general plans of the counties and cities that are associated with the project area indicate support for transportation improvements that help address anticipated growth.

Project Area Setting

As indicated in the Regional Setting subheading, the populations of cities along the I-15 CP are projected to grow between 2010 and 2040, and the 2016–2040 RTP/SCS project list identifies a number of transportation improvement projects along I-15, I-10, and SR210 to accommodate the projected transportation demand from the growth and development that has taken place in

communities along the I-15 corridor and is expected to continue. The continuing growth and development are projected to result in increased traffic demand and congestion; longer commute times; increased energy consumption; air pollution; higher accident rates that are typically related to congestion; and operational degradation of the freeway mainline, local interchanges, and adjacent local arterials. The projected operational deficiencies and breakdown of traffic operations on these facilities are expected to have adverse impacts on the economic vitality of the region and the transport of goods and emergency services along this corridor.

The I-15 corridor is experiencing considerable performance problems due to heavy traffic demand, truck volumes (10 to 15 percent of the total traffic), and a lack of other reliable travel options. Operating conditions for the I-15 corridor are expected to continually degrade if no capacity and operational improvements are made in the corridor. Current average daily traffic on I-15 varies from 214,000 vehicles at the Riverside/San Bernardino county line to 136,000 vehicles between SR-210 and I-215 (Caltrans 2017). Recurring congestion is observed on a daily basis during weekday peak periods and frequently on weekends.

As a result of the existing and projected congestion, travel speeds are expected to decrease and vehicle hours of delay to increase by 2045. Travel demand for the I-15 corridor has been growing 2 to 2.5 percent per year on average over the last 10 years and is expected to double by 2045, exacerbating performance problems. By 2045, LOS “F” is forecast to occur in most of the corridor SB in the morning peak hour and LOS “E” or “F” is forecast to occur in several places in both directions of travel in the PM peak hour (SBCTA 2005).

2.1.3.3 Environmental Consequences

No Build Alternative

Under the No Build Alternative, there would be no changes to the freeway mainline and therefore no potential to change accessibility. Travel speeds on I-15 would continue to deteriorate, congestion levels would increase, and overall operational performance would continue to decline. Planned growth within the region would not be accommodated.

Build Alternative

Temporary

Construction activities would be temporary and short-term, lasting approximately 36 months. There is low potential for population growth or local business impacts during construction of the proposed project.

Permanent

As described above, the regional project area has experienced population, housing, and employment growth in recent decades. This growth is associated with existing and future land uses, development, and economic growth. The region is projected to continue to experience population growth, which is expected to occur with or without implementation of the proposed project.

Based on the criteria for performing a “first-cut screening” as described above, the likely growth potential for the proposed project is analyzed below.

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

The proposed project would not alter accessibility to and from I-15, as no permanent changes or new interchanges are proposed and existing on- and off-ramp locations would be maintained. No developable land areas in the immediate vicinity of the project improvements would be made more accessible by the proposed project, and the proposed project would not open new areas to development or lead to changes in land use. The project is not expected to require acquisition of additional land.

As demonstrated in the March 2017 *Traffic Study Report* prepared for the proposed project, due to the improved travel speeds resulting from implementation of the proposed Express Lanes, the 2024 traffic volumes along I-15 are projected to be higher with the project than would be the case in absence of the project. Relative to the No-Build Alternative, higher traffic volumes are also anticipated under the Build Alternative for Horizon Year 2045.

Table 2-12 Travel Time provided in Section 2.1.5.3 below indicates that in Opening Year 2024 and Horizon Year 2045, travel time savings through the project limits during the AM and PM peak hours are projected for travelers in both the GP and Express Lanes in each direction. In 2024, travel time savings through the project limits in the AM peak hour relative to the No-Build Alternative would be 1.8 minutes for the GP lanes and 2.4 minutes for the Express Lanes in the NB direction and 6.7 minutes for the GP lanes and 8.2 minutes for the Express Lanes in the SB direction. During the 2024 PM peak hour, travel time savings through the project limits relative to the No-Build Alternative would be 5.1 minutes for the GP lanes and 5.8 minutes for the Express Lanes in the NB direction and 13.1 minutes for the GP lanes and 13.6 minutes for the Express Lanes in the SB direction. In 2045, travel time savings through the project limits in the AM peak hour relative to the No-Build Alternative would be 9.8 minutes for the GP lanes and 13.7 minutes for the Express Lanes in the NB direction, and 23.1 minutes for the GP lanes and 33.8 minutes for the Express Lanes in the SB direction. During the 2045 PM peak hour, travel time savings relative to the No-Build Alternative would be 5.6 minutes for the GP lanes and 7.3 minutes for the Express Lanes in the NB direction and 14.3 minutes for the GP lanes and 21.1 minutes for the Express Lanes in the SB direction.

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

The project type, project location, and growth-pressure would have limited to no influence on growth because the majority of the area surrounding the corridor is built-out. There are undeveloped areas within the project area, particularly areas surrounding the I-15/I-210 interchange that could potentially be developed; however, the existing SCE transmission corridor, which parallels I-15, limits development potential in this area. The project would not change how these areas are accessed (Cherry Avenue and Baseline Road) but rather would improve travel times to these areas. The proposed project is designed to alleviate existing patterns of congestion rather than create a new route to an area not currently served by major transportation routes.

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

As discussed above, the proposed project would not influence growth because the project would not directly result in any changes to land use or encourage changes in population density. Growth in the region is anticipated to occur whether or not the project is constructed.

While the project would result in some improvements in accessibility due to reductions in travel times, these improvements would not influence the attractiveness of some areas to development over others. **Table 2-1** on page 2-9, which identifies reasonably foreseeable development in the project vicinity, provides confirmation that none of the identified developments are in any way contingent upon the construction of this project. Project-related growth is not reasonably foreseeable as defined by NEPA.

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

As discussed above, the proposed project would not result in project-related growth. Accordingly, no resources of concern would be impacted.

Adverse effects under NEPA or significant impacts under CEQA related to growth will not occur as a result of the proposed project.

Based on the above first-cut screening analysis, no further analysis with respect to growth is required for this project.

2.1.3.4 Avoidance, Minimization, and/or Mitigation Measures

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

2.1.4 Farmlands/Timberlands

2.1.4.1 Regulatory Setting

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 United States Code 4201-4209; and its regulations, 7 Code of Federal Regulations [CFR] Part 658) require federal agencies, such as the Federal Highway Administration, (FHWA), to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

2.1.4.2 Affected Environment

Information used in this section is based on the October 2017 *Community Impact Assessment*.

The California Department of Conservation, Office of Land Conservation maintains a statewide inventory of farmlands. These lands are mapped by the Division of Land Resource Protection as part of the Farmland Mapping and Monitoring Program (FMMP). For the purposes of this analysis, farmland includes lands identified by the State of California Department of Conservation as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, as well as those properties encumbered by a Williamson Act preserve contract. In general, the study area is composed of almost entirely urbanized and built-

out land that does not serve an agricultural purpose. The entire study area is located either within the Los Angeles-Long Beach-Anaheim, CA 51445 or the Riverside-San Bernardino, CA 75340 Urbanized Areas as delineated by the 2010 U.S. Census (U.S. Census 2010b and U.S. Census 2010c). Generally, any farmland (regardless of quality) that is within a delineated urban area is not subject to the Farmland Protection Policy Act (FPPA) and completion of Form NRCS-CPA-106 as well as coordination with the Natural Resources Conservation Service (NRCS) is not required (Caltrans 2011). However, in conjunction with preparing of the NRCS-CPA-106 forms, the available FMMP data dated 2016, identifies several unique and prime farmlands within half a mile of the project limits. **Figure 2-10** shows the FMMP data overlaid on an aerial map featuring the project design footprint. Although **Figure 2-10** indicates the presence of farmlands within existing state right of way, this area has been restricted to transportation uses for more than 30 years. Accordingly, the proposed project will not result in the conversion of any farmland. The FMMP also delineates farmlands and other lands through the review of historic and present aerial photography, past documentation, and soil mapping, with limited consideration of real property boundaries. Farmlands that are adjacent to the project limits include the following:

- Approximately 450 acres of unique farmland along the east side of I-15 surrounding the I-15/SR-210 interchange.
- Approximately 10 acres of unique farmland along Etiwanda Avenue, just east of I-15. This land appears to have been developed with residential uses and is no longer mapped in the current FMMP (California Department of Conservation 2016).
- Approximately 23 acres of unique farmland along Arrow Route, just east of I-15.
- Approximately 16 acres of prime farmland along Milliken Avenue on the northwest side of the I-15/SR-60 interchange.
- Approximately 11 acres of farmland of local importance along Hamner Avenue on the southwest side of the I-15/SR-60 interchange.
- Approximately 68 acres of farmland of local importance along Wineville Avenue to both sides of I-15 generally surrounding Cantu-Galleano Ranch Road.
- Approximately 192 acres of prime farmland along the east side of I-15, from south of Bellegrove Avenue to the southern project limits.
- There is no Williamson Act Contract Land or Timberland Production Zones within the project area.

While these lands are located in a Census-designated Urbanized Area, the identification of these lands in the FMMP warranted coordination with NRCS and preparation of Form NRCS-CPA-106.

2.1.4.3 Environmental Consequences

No Build Alternative

Under the No Build Alternative, no changes to existing roadways would occur in the project area. Therefore, no farmland or forest land would be incorporated into the No Build Alternative.

Build Alternative

Temporary

All farmlands identified are delineated beyond the existing transportation right of way. While there are unique and prime farmlands located adjacent or close to the I-15 corridor, the proposed project is anticipated to be constructed entirely within the I-15 right of way. If there are farmlands in production, dust generated by construction activities would have temporary and minor effects on farmlands. Therefore, due to the temporary nature of construction activities, no temporary adverse effects on farmlands or timberlands would result from construction of the project.

Permanent

Two Form NRCS-CPA-106s, one prepared for San Bernardino County and one for Riverside County, were submitted to the NRCS Redlands office on October 26, 2017 for review. On December 18, 2017, Tomas Aguilar-Campos, the District Conservationist of the NRCS Redlands office returned the completed forms, which indicated that 289.7 acres of prime and unique farmlands are present in the footprint of the Riverside County portion of the project and 350.8 acres of prime and unique farmlands are present in the footprint of the San Bernardino County portion of the project. As discussed above, it is expected that the proposed project will be constructed within existing state right of way. Although the FMMP data indicates farmland to be within the project limits, as discussed above, existing state right of way associated with the project limits has been utilized exclusively for transportation purposes for many years. Visits to the project area as well as referencing current aerial imagery make clear that there is no farmland within the state right of way. A meeting was held with Mr. Aguilar-Campos on January 18, 2018 to discuss the discrepancies. Subsequent to this meeting, NRCS indicated that because the NRCS-CPA-106 forms are based on data directly related to existing FMMP data, the completed forms would not be revised. Copies of the completed NRCS-CPA-106 forms are included in Chapter 4 of this document.

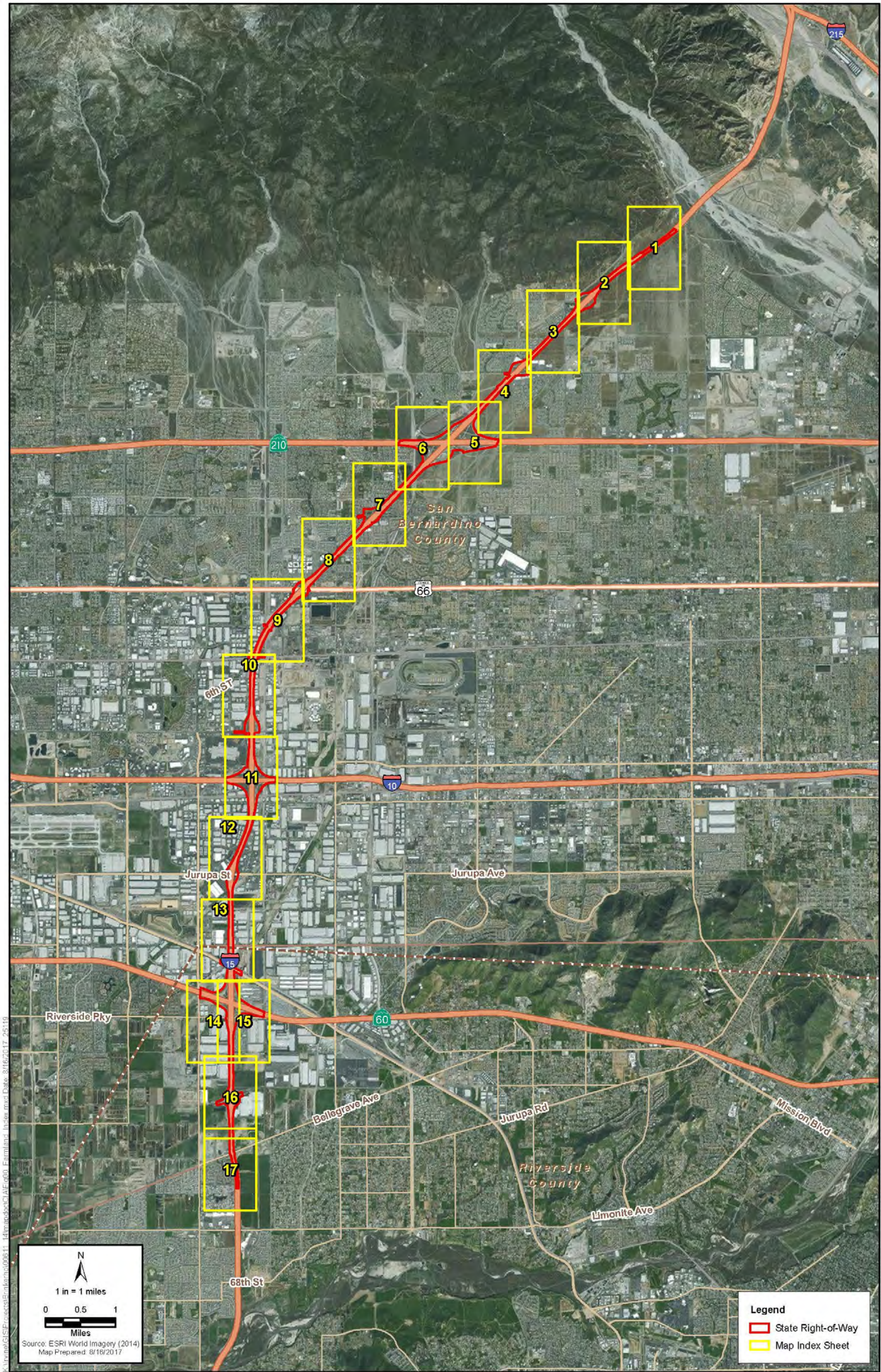
The proposed project is planned and expected to be constructed entirely within the I-15 state right of way. No conversion of prime farmland, unique or farmland of local importance would result under the Build Alternative. Therefore, no farmland would be permanently incorporated into the project, and no impacts on farmlands or forestland or timberlands would result from implementation of the project.

2.1.4.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

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Figure 2-10. Farmland Index Sheet

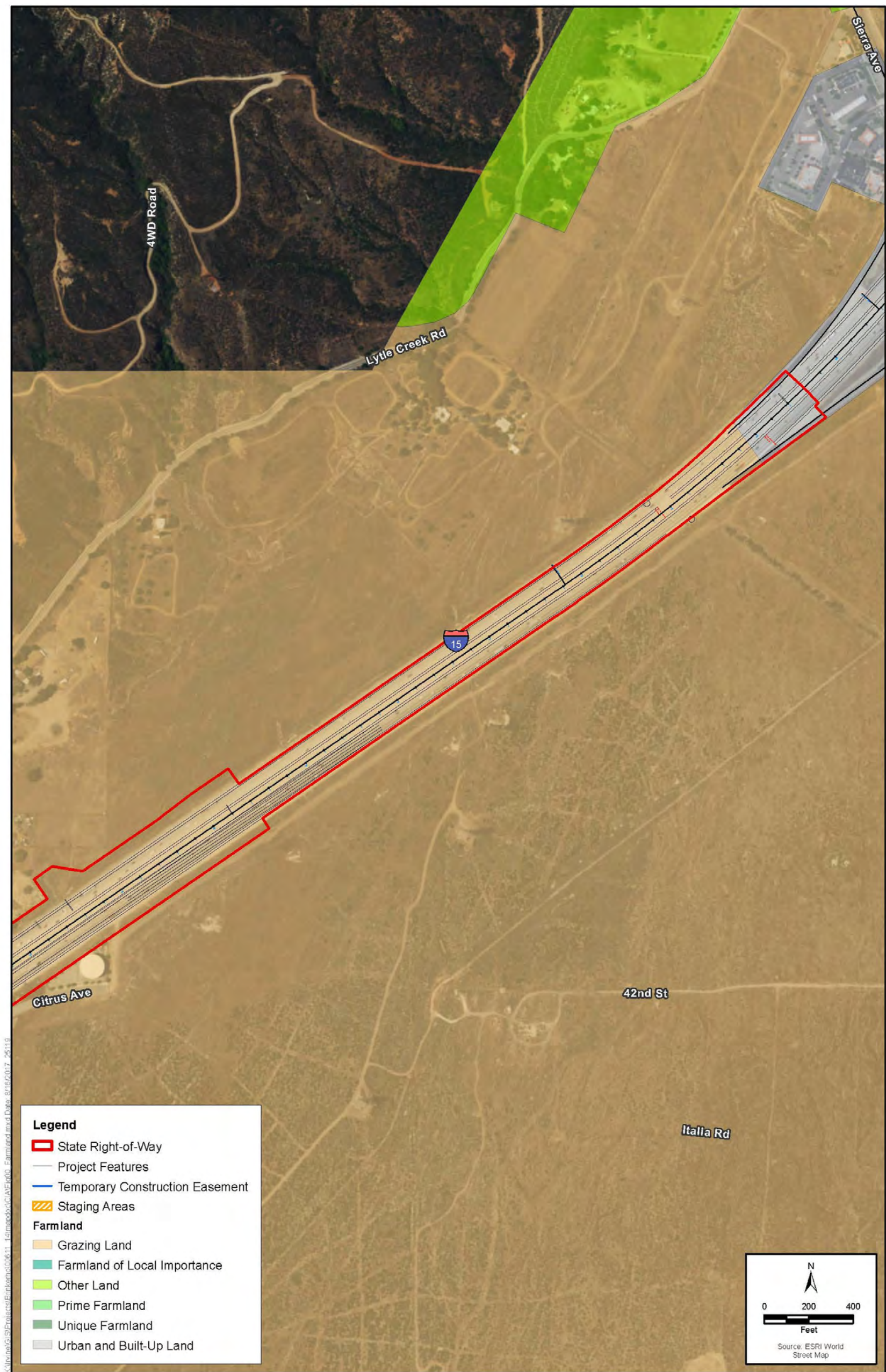


Index Sheet
Farmland
Interstate 15 (I-15) Corridor Project

Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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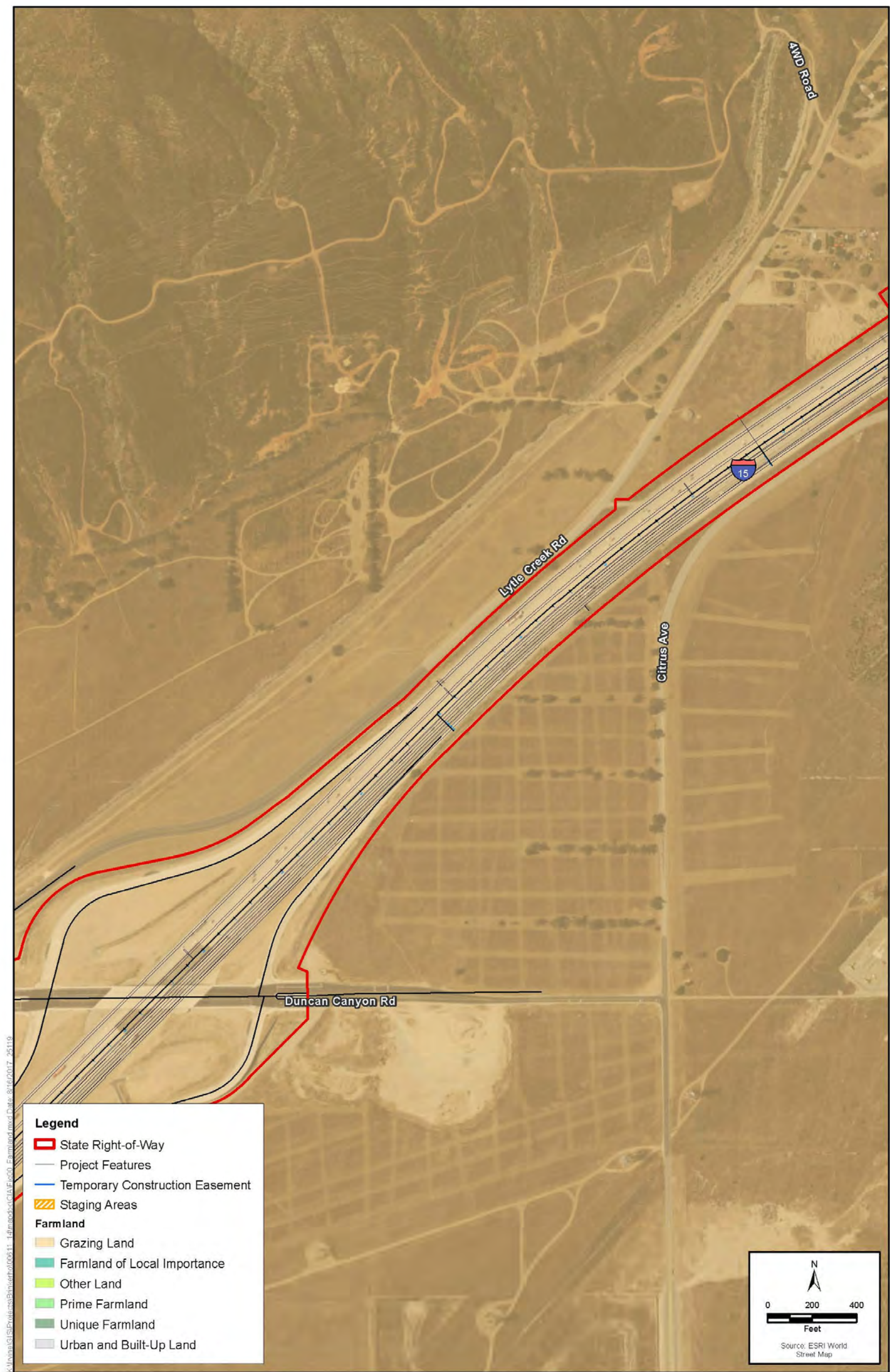
Figure 2-10. Farmland
Sheet 1



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 2

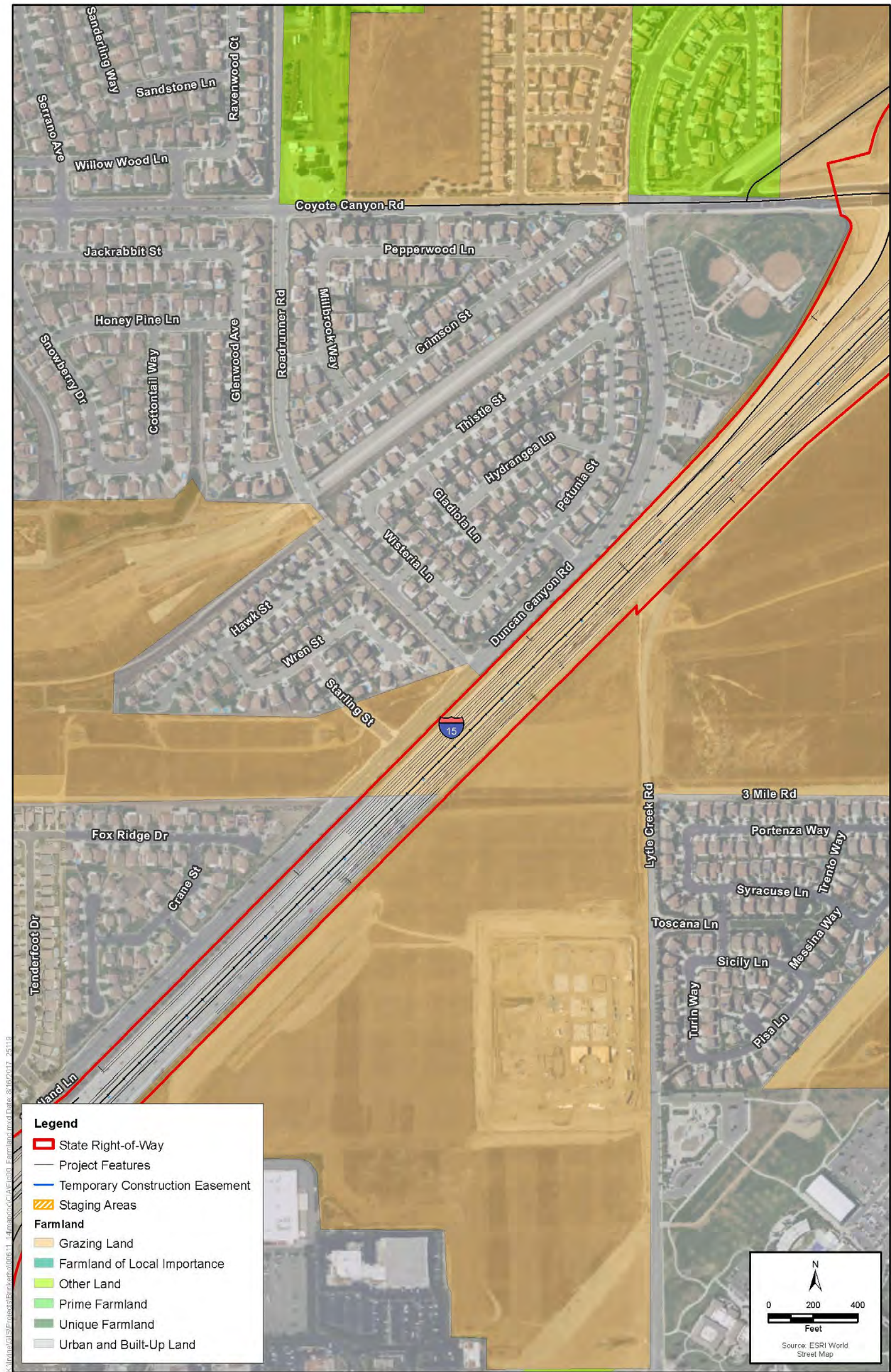


Sheet 2
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years. Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 3



Sheet 3
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 4

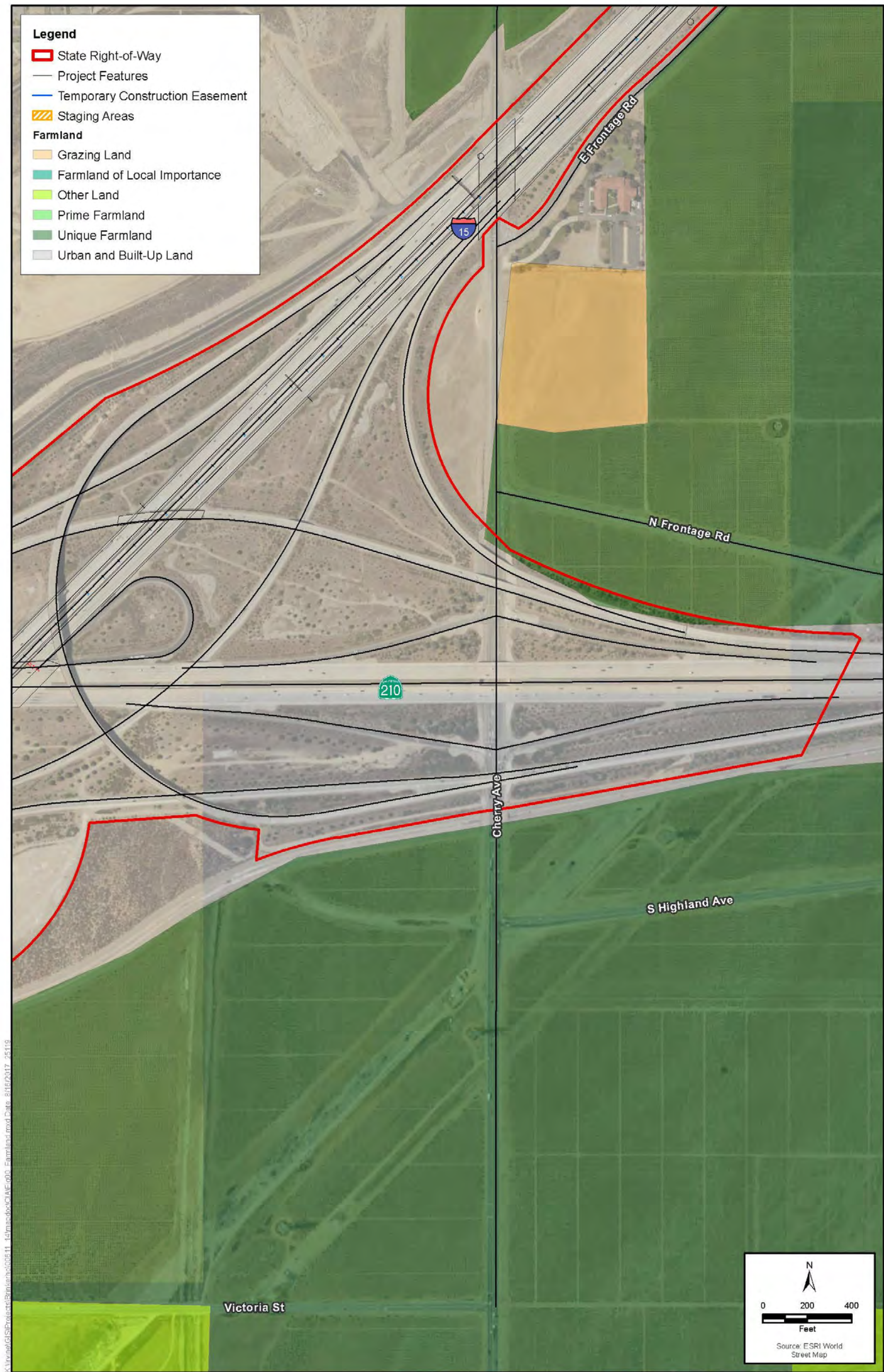


Sheet 4
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 5



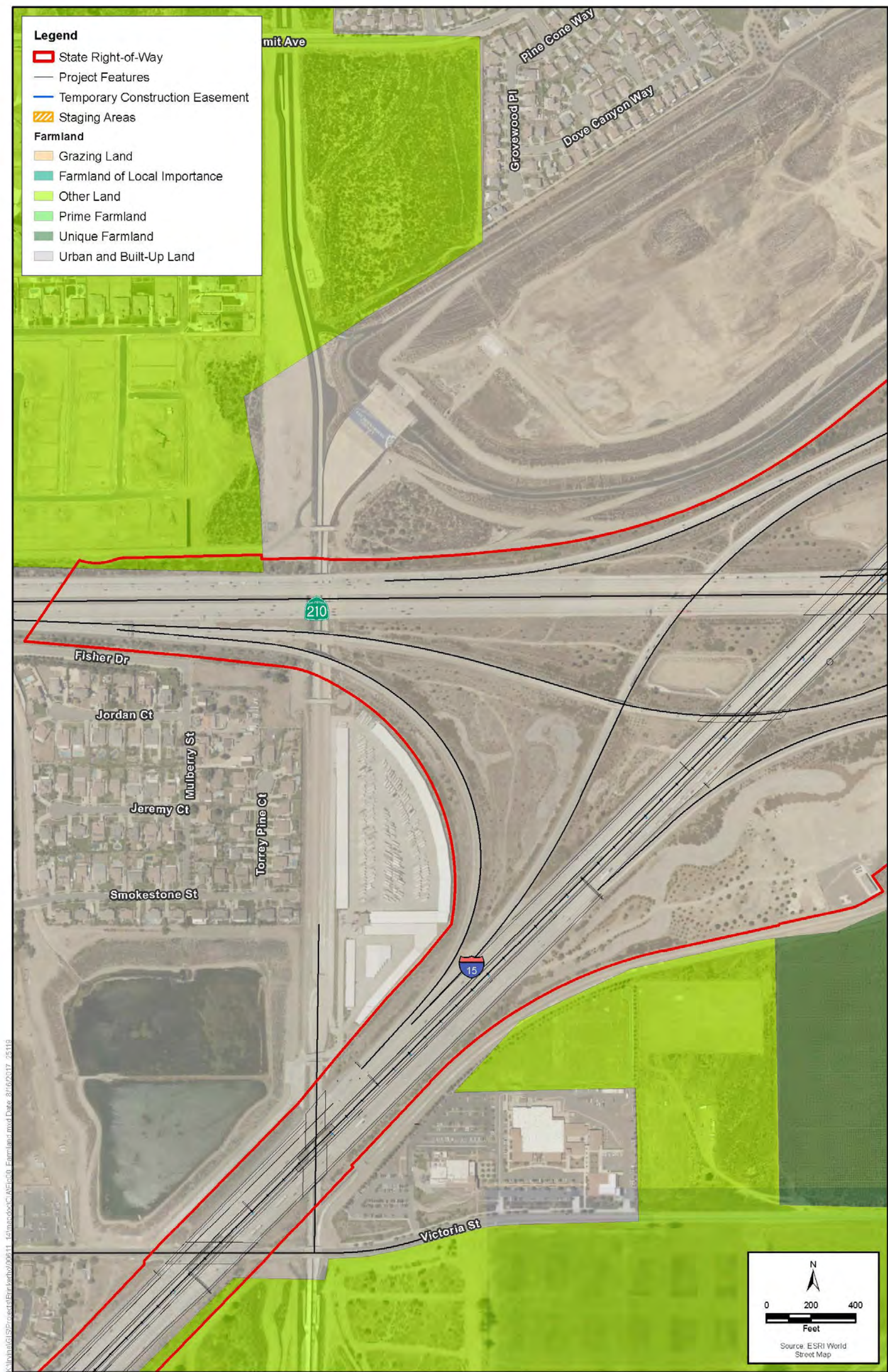
Sheet 5
Farmland

Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 6

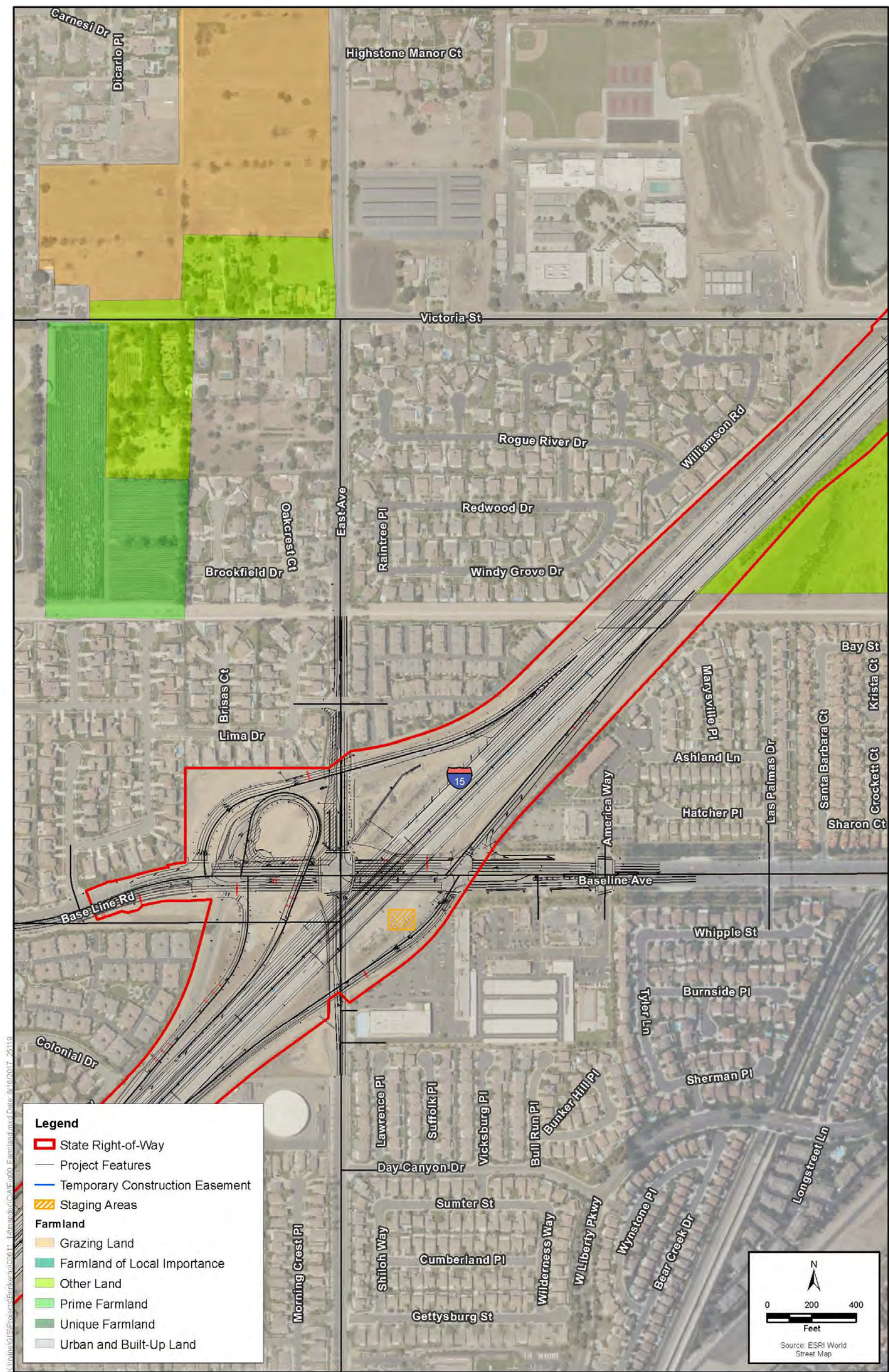


Sheet 6
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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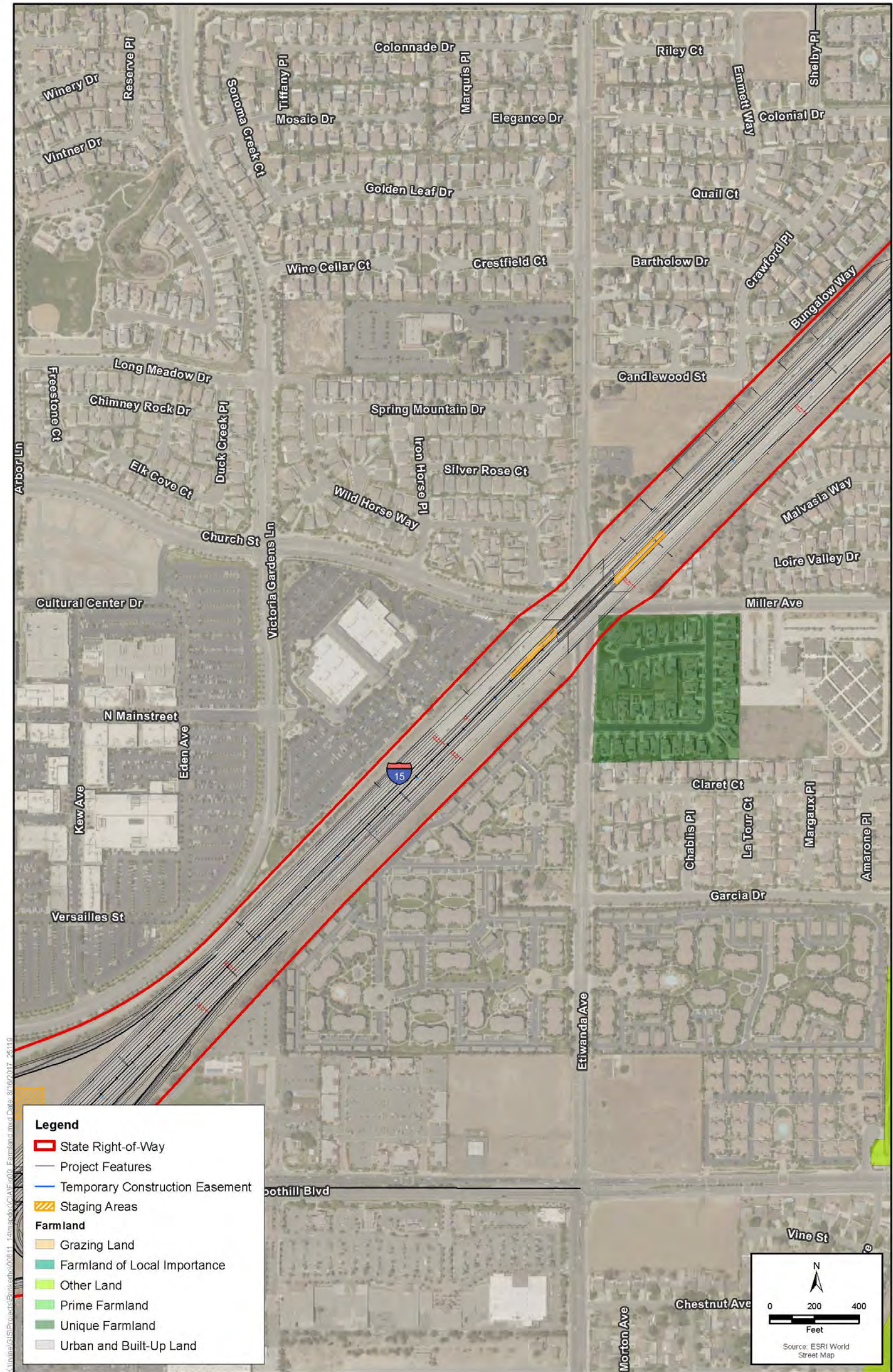
Figure 2-10. Farmland
Sheet 7



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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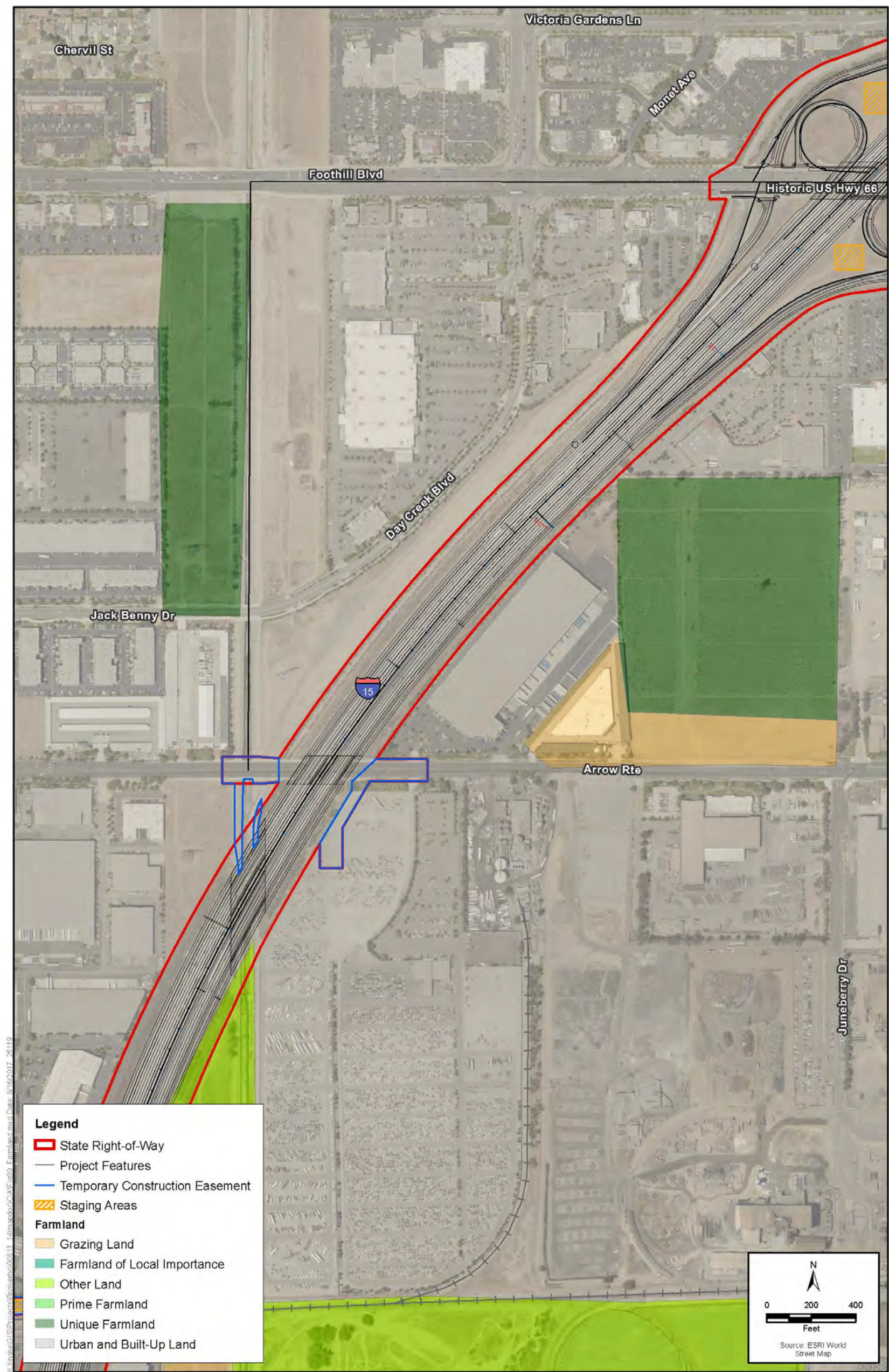
Figure 2-10. Farmland
Sheet 8



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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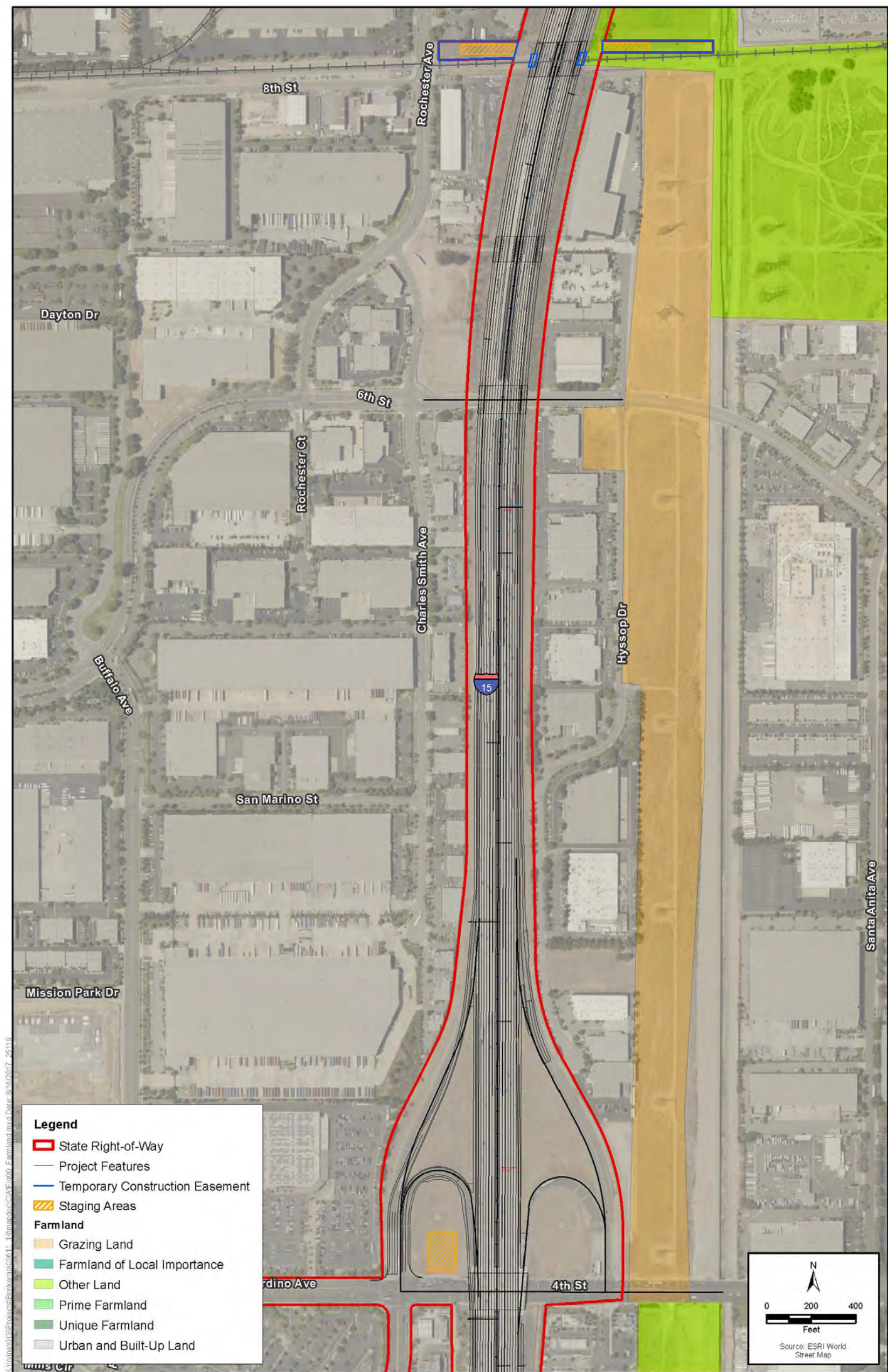
Figure 2-10. Farmland
Sheet 9



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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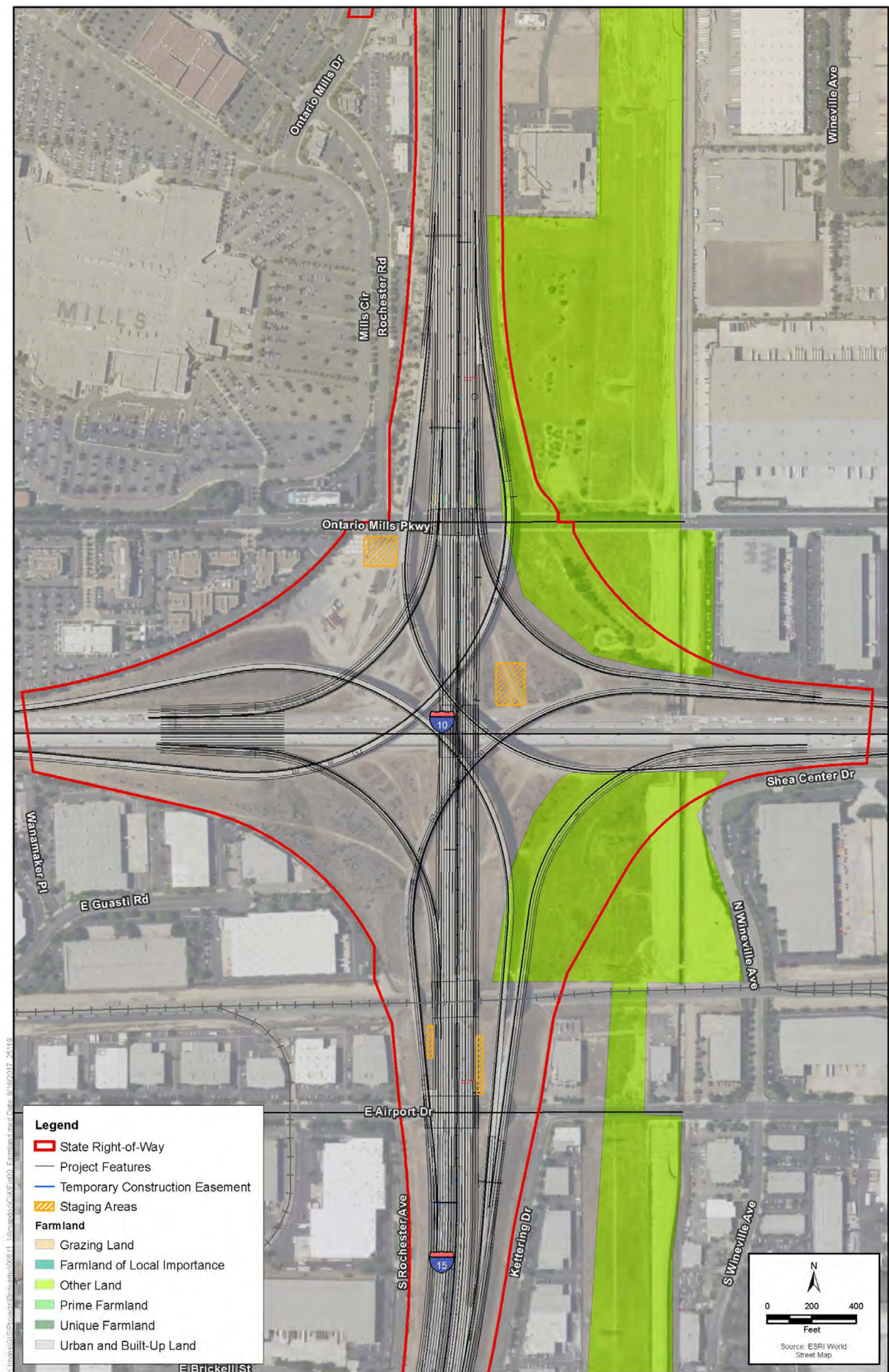
Figure 2-10. Farmland
Sheet 10



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 11

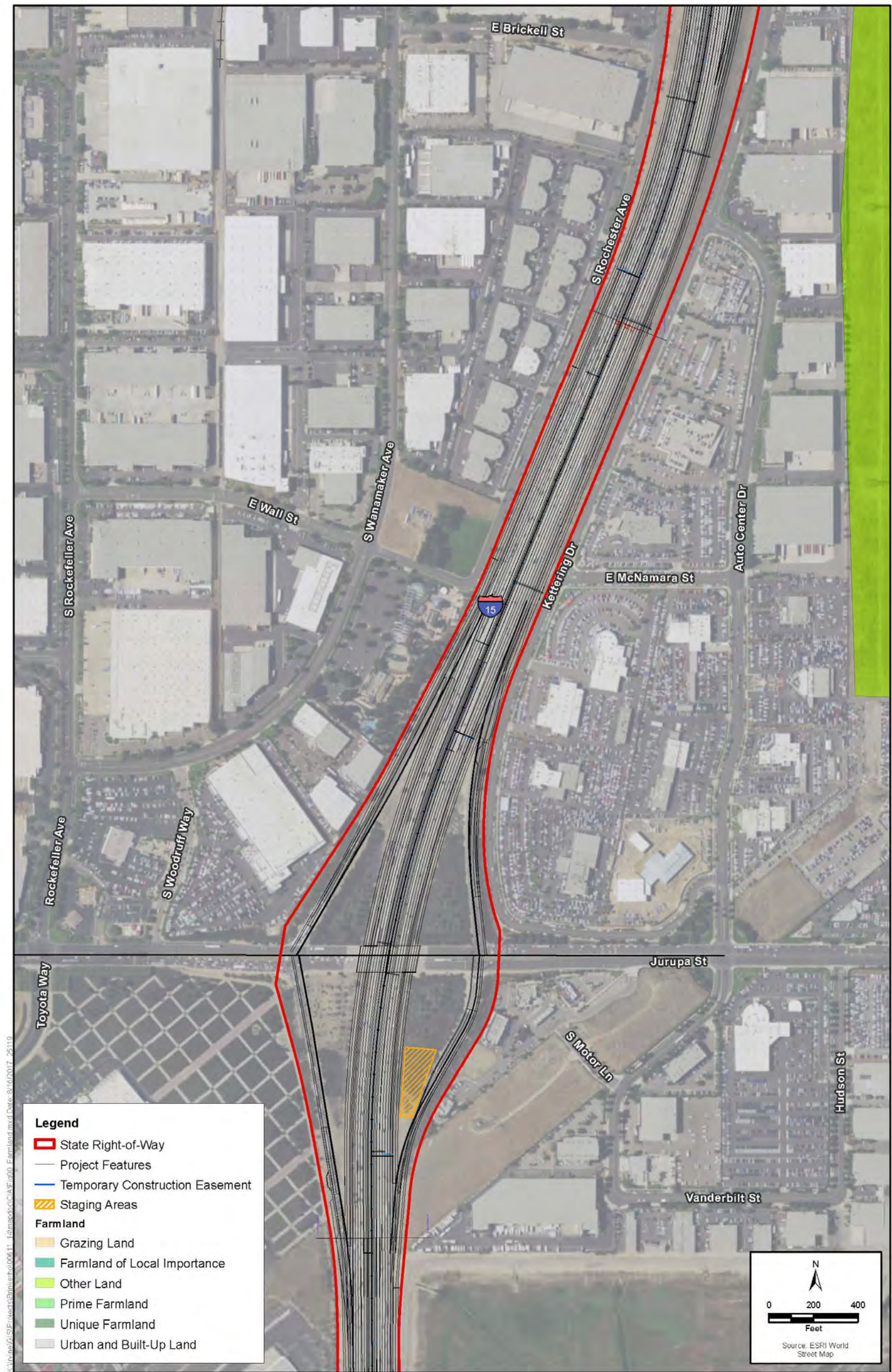


Sheet 11
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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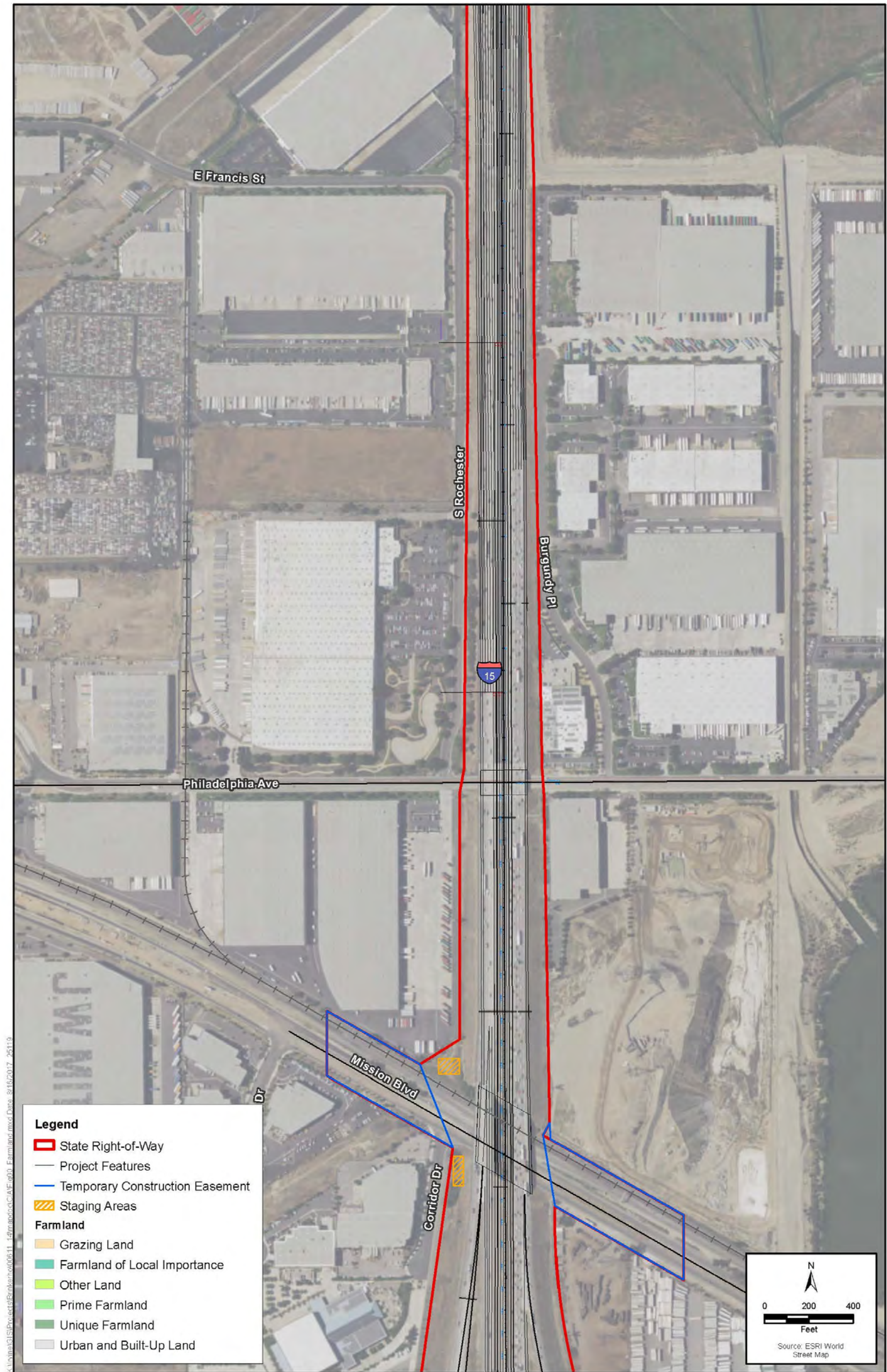
Figure 2-10. Farmland
Sheet 12



Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 13

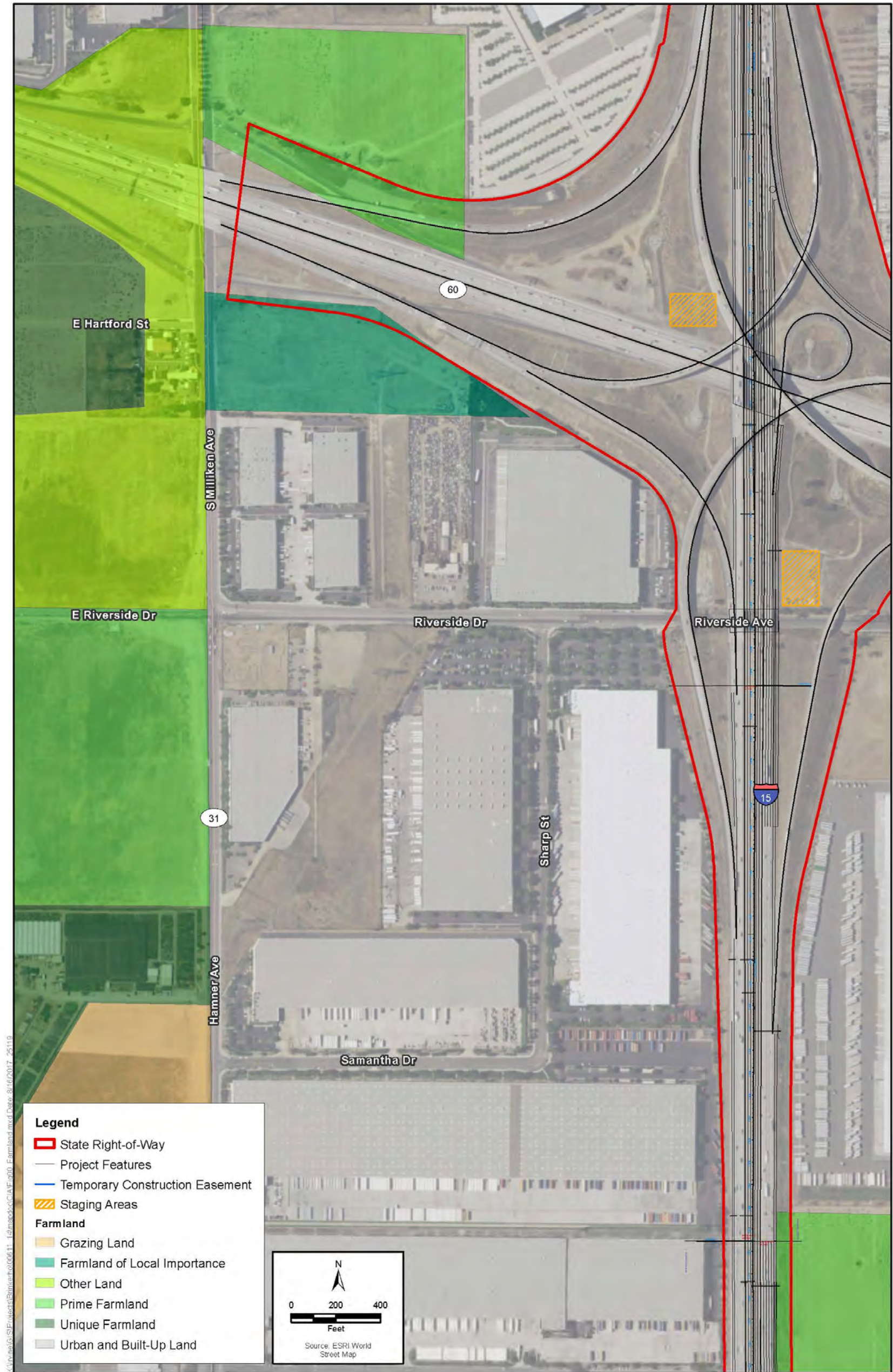


Sheet 13
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 14



Sheet 14
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 15

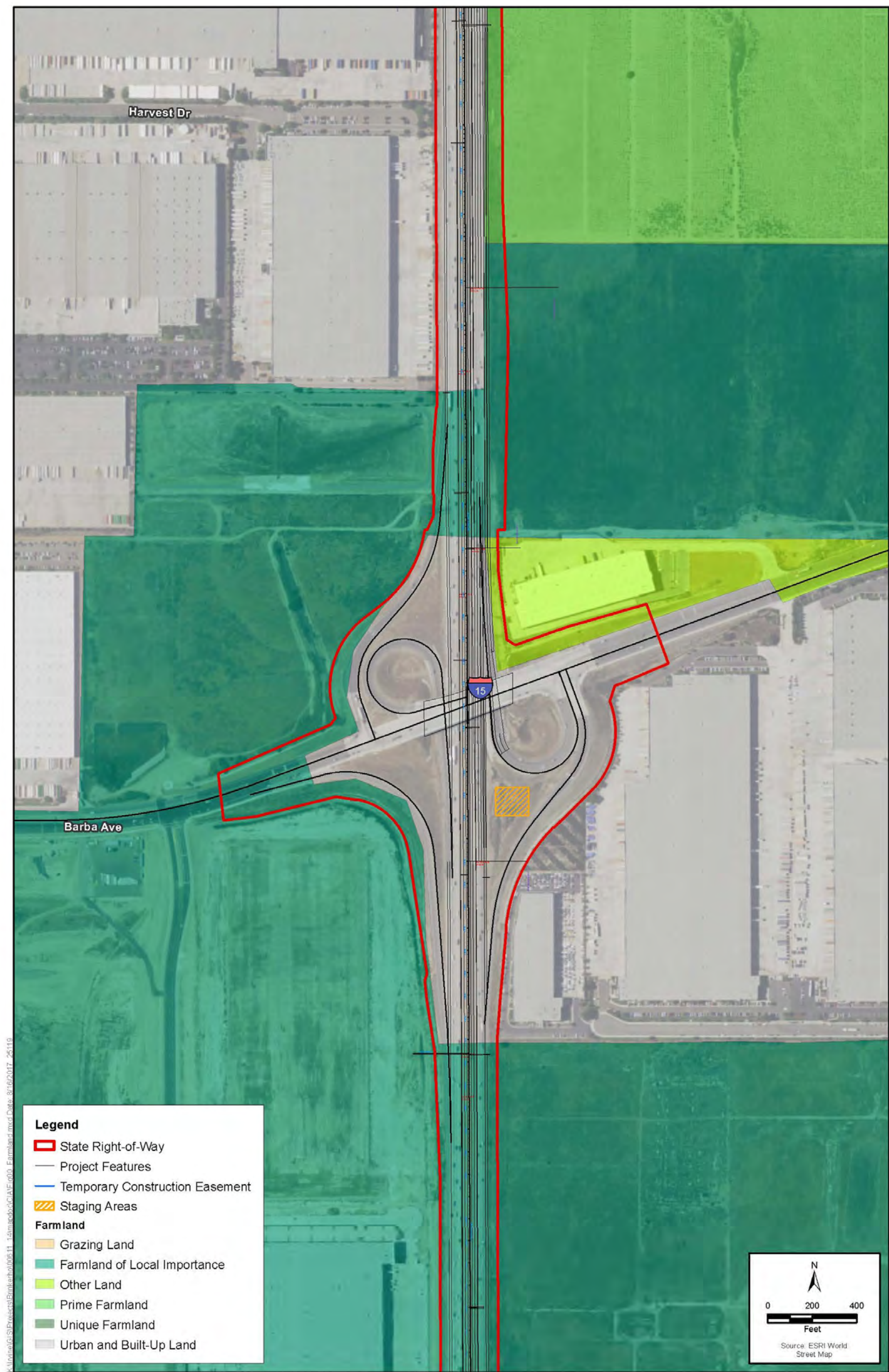


Sheet 15
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 16

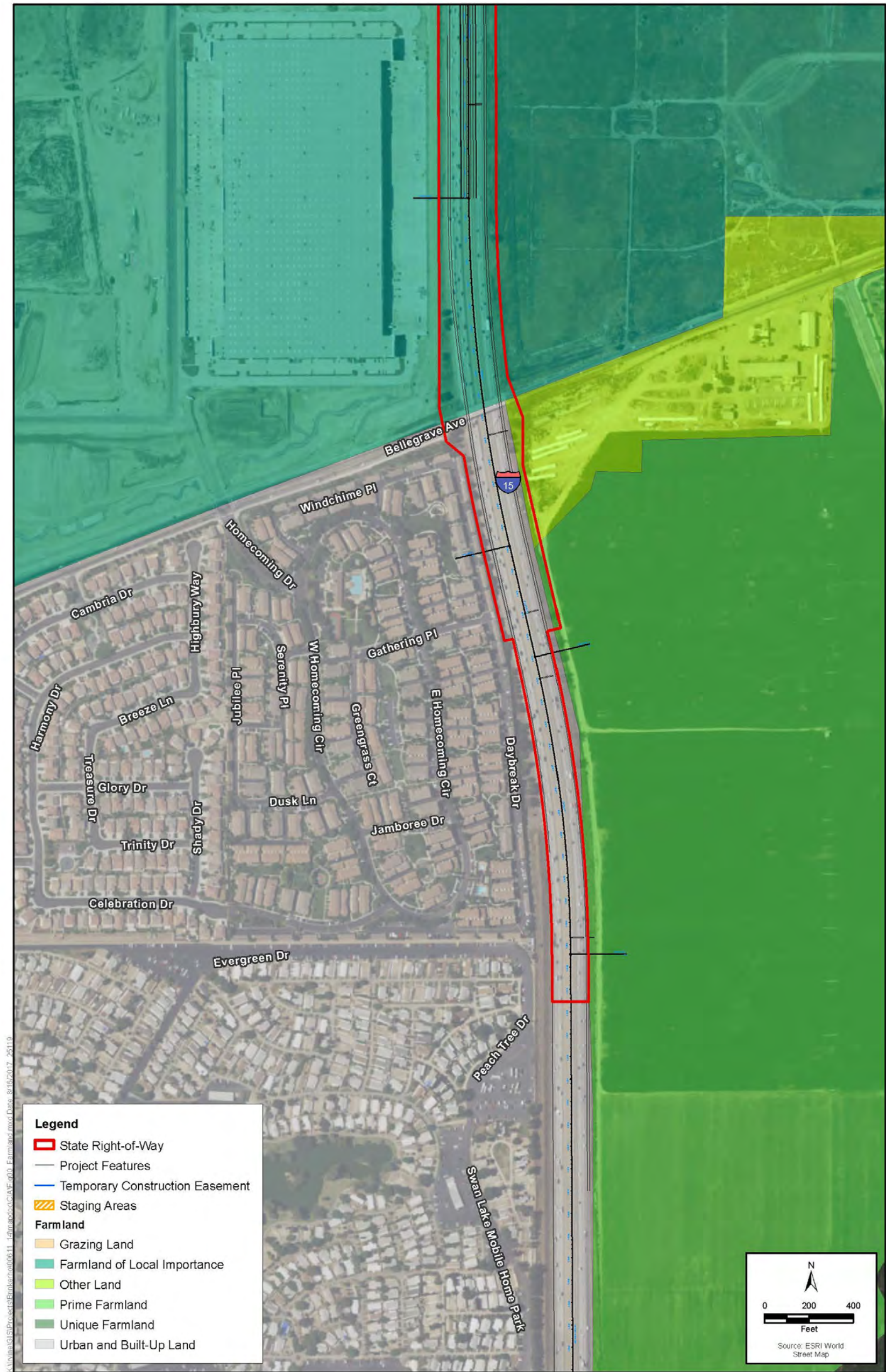


Sheet 16
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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Figure 2-10. Farmland
Sheet 17



Sheet 17
Farmland
Interstate 15 (I-15) Corridor Project

Areas within the state right of way have been identified as farmlands due to underlying soil conditions per FMMP data. However, as part of the existing I-15 freeway, these areas have been limited to transportation uses for many years.
Source: California Important Farmland Finder. <http://maps.conservation.ca.gov/ciff/ciff.html>. Accessed: July, 2016.

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2.1.5 Community Character and Cohesion

2.1.5.1 Regulatory Setting

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

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

2.1.5.2 Affected Environment

Information and analysis in this section is based on the October 2017 *Community Impact Assessment* prepared for the project. The communities study area is the area in proximity to the proposed project, which includes the populations and communities most likely to experience the potential impacts from the physical improvements associated with the project. The study area includes all Census Block Groups within approximately one-half mile of the portion of the I-15 corridor associated with the project limits. The study area falls within multiple jurisdictions including the cities of Eastvale and Jurupa Valley, which are in Riverside County, and the cities of Ontario, Rancho Cucamonga, and Fontana, which are in San Bernardino County. See **Figure 2-11**, Study Area Census Block Groups. In addition to reviewing the Census Block Groups, the constituent geographical areas within the study area were examined in the context of potential distinct community characteristics. Community profile was developed using some elements of community coherence, including presence of residential neighborhoods, demographic characteristics, housing characteristics, economic conditions, and location of community services and facilities.

Demographic Characteristics

Census data from U.S. Census Bureau, 2010–2014 American Community Survey 5-Year Estimates was used to describe the demographic characteristics of the communities and neighborhoods within the project study area. The discussion below describes the community characteristics and level of cohesion according to their location within the cities traversed by the project corridor. **Table 2-4** presents the age distribution of the population within the region and the communities in the study area. **Table 2-12**, Race and Ethnic Composition, in **Section 2.1.7**, Environmental Justice, presents the race and ethnic distribution of population within the region and communities within the study area.

City of Eastvale Communities

The City of Eastvale, the smallest city in the project area, is located within Riverside County at the southern end of the project limits. Residential neighborhoods within the study area consist of a large tract housing development and Swan Lake Mobile Home Park and appear to have community coherence. These communities are located south of the Cantu-Galleano Ranch Road, approximately half a mile beyond the southern terminus of the Express Lanes associated with this project. Several commercial and industrial developments, as well as some vacant lands, are adjacent to the freeway within this section of the study area. The City of Eastvale study area communities are located within one Census Block Group; another is shared with the City of Jurupa Valley. Compared to the city, the population in this block group has a similar rate of population 18 of age and less, but a higher rate in the age group of 64 and older. The community population in age group 64 or older is approximately 10 percent compared to the 6.9 percent of the City's population overall. The City of Eastvale has a lower percent of Hispanics than other cities within the project area. However, according to **Table 2-12. Race and Ethnic Composition, in Section 2.1.7, Environmental Justice**, the community study area has a higher concentration of Hispanic population, but comparable to the City of Eastvale overall in terms of its rate of the total minority populations.

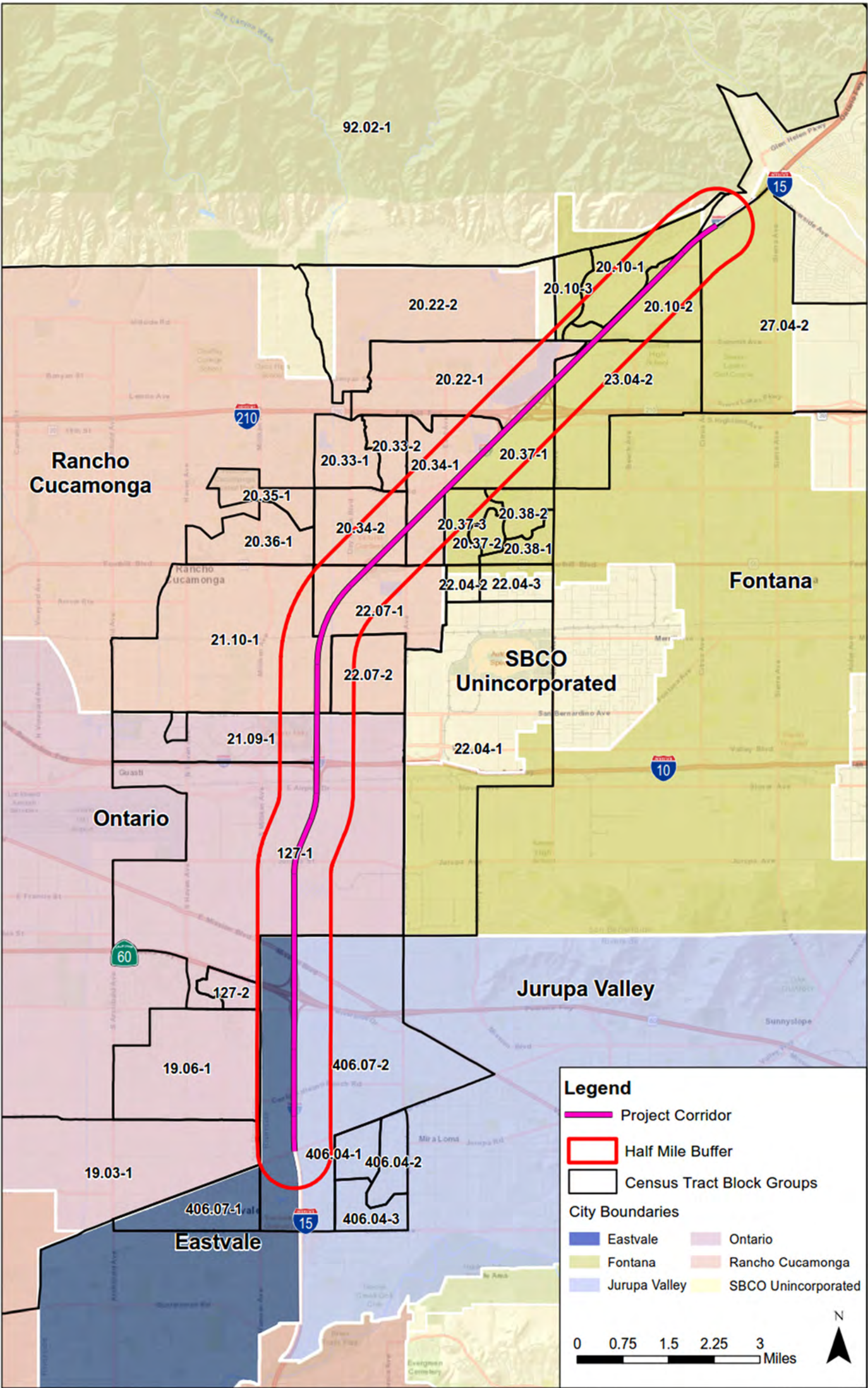
City of Jurupa Valley Communities

The City of Jurupa is located within Riverside County at the southern limits of the project area. Commercial and industrial facilities or vacant land are adjacent to the freeway within the project area. There are no residential neighborhoods adjacent or in close proximity to the project area within the communities in the study area of the City of Jurupa Valley. Residential areas located approximately half a mile or more from the project limits appear to have community coherence. Overall, two of the block groups (406.04-1, 406.04-3) within the communities in the study area have a higher percentage of people 65 or older than in the City of Jurupa Valley. Census Block Group 406.04-1 has a much lower rate of its population in the age group 18. This is an indication of fewer families with children within these communities. Hispanic population and minority population percentages are, in general, lower within most of the block groups of the communities in the study area than in the city.

City of Ontario Communities

The communities within the City of Ontario study area are mostly on the west side of the project area and south of the I-10 corridor along the southern section of the project area. There are no existing communities adjacent or near the project area within the City of Ontario. Land near the project area is either developed with commercial and industrial land uses or vacant. The closest community is located within the tract housing developments in the area just south of SR-60, at approximately half a mile west of the freeway. This residential area appears to have community coherence. Other neighborhoods exist south of Fourth Street and west of Milliken Avenue, and are primarily made up of small (studio to two-bedroom) to medium-sized (three- or four-bedroom) apartment complexes. These units are in close proximity to areas that are commercially developed. Census data in block groups representing these communities show that the percentage of population 18 years old or less is similar to that of the city overall. However, the percentage of people 65 years or older is lower. Census Block Group 19.06-1, located in the community south of SR-60, has only 2.64 percent of its population within 65 years or older age group compared to the city's 7.6 percent.

Figure 2-11. Study Area Census Block Groups



Source: I-15 CP Community Impact Assessment, October 2017.

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Table 2-4. Age Distribution

Geography		Total/Percentage						Total
		Population < 18	%	Population 18–64	%	Population > 64	%	
County								
Riverside (Riv)		616,767	27.21	1,367,444	60.32	282,688	12.47	2,266,899
San Bernardino (SBd)		584,394	28.11	1,294,430	62.27	199,762	9.61	2,078,586
City								
Eastvale (Riv)		17,897	32.4	33,558	60.7	3,843	6.9	55,298
Jurupa Valley (Riv)		27,788	28.6	61,185	62.9	8,274	8.5	97,247
Ontario (SBd)		46,990	28.2	107,171	64.2	12,731	7.6	166,892
Rancho Cucamonga (SBd)		42,070	24.7	112,857	66.3	15,243	8.96	170,170
Fontana (SBd)		61,550	30.6	127,459	63.3	12,346	6.1	201,355
Census Block Group Study Area in Cities within the Project Area								
Eastvale	406.07-1	1,521	31.39	2,875	59.34	449	9.27	4,845
Eastvale / Jurupa Valley	406.07-2	1,100	29.57	2,239	60.19	381	10.24	3,720
Jurupa Valley	406.04-1	547	31.4	1,023	58.72	172	9.87	1,742
	406.04-2	445	21.19	1,347	64.14	149	7.1	2,100
	406.04-3	289	15.91	1,335	73.47	193	10.62	1,817
Ontario	19.03-1	2,044	29.97	4,279	62.74	497	7.29	6,820
	19.06-1	1,173	28.91	2,778	68.46	107	2.64	4,058
	21.09-1	1,110	27.95	2,694	67.82	168	4.23	3,972
	127-1	617	31.27	1,248	63.25	108	5.47	1,973
	127-2	514	22.63	1,625	71.55	132	5.81	2,271
Rancho Cucamonga	20.22-1	1,082	25.3	2,904	67.9	291	6.8	4,277
	20.22-2	2,695	32.39	4,995	60.04	630	7.57	8,320
	20.33-1	1,592	31.29	3,134	61.6	362	7.11	5,088
	20.33-2	967	31.63	1,963	64.21	127	4.15	3,057
	20.34-1	2,211	30.16	4,684	63.88	437	5.96	7,332
	20.34-2	2,113	27.72	5,103	66.94	407	5.34	7,623
	20.35-1	935	24.67	2,575	67.94	110	2.9	3,790
	20.36-1	2,258	25.25	5,838	65.28	847	9.47	8,943
	21.10-1	1,869	25.79	5,145	71	232	3.2	7,246
	22.07-1	577	29.14	1,338	67.58	65	3.28	1,980
	22.07-2	20	0.71	2,773	98.72	16	0.57	2,809
Fontana	20.10-1	1,393	29.18	3,164	66.28	217	4.55	4,774
	20.10-2	706	30.25	1,531	65.6	97	4.16	2,334
	20.10-3	949	29.31	2,247	69.39	42	1.3	3,238
	20.37-1	291	31.63	575	62.5	54	5.87	920
	20-37-2	607	26.8	1,542	68.08	116	5.12	2,265
	20.37-3	1,424	29.16	3,331	68.22	128	2.62	4,883
	20.38-1	781	24.98	1,453	46.48	979	4.69	3,126
	20.38-2	545	19.93	2,075	75.9	114	4.17	2,734
	22.04-1*	312	32.5	556	57.91	92	9.58	960

Table 2-4. Age Distribution (continued)

Geography		Total/Percentage						Total
		Population < 18	%	Population 18–64	%	Population > 64	%	
	22.04-2*	461	27.53	682	40.74	27	1.61	1,674
	22.04-3*	1,206	30.81	2,504	63.98	204	5.21	3,914
	23.04-2	3,496	33.53	6,507	62.4	425	4.08	10,428
	27.04-2	2,298	28.75	5,219	65.29	476	5.96	7,993
	92.02-1*	322	22.55	879	61.55	227	15.9	1,428

Note: * Located within the boundaries of the City of Fontana and San Bernardino County Unincorporated Area.
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, 2017.

Hispanics represent approximately 70 percent of the city's population. However, most block groups within the communities in the study area have a lower percentage of Hispanics, with rates that range between 32.17 and 57.29. The Hispanic population still represents almost half of the total population in most of the Census Block Groups in the communities in the study area.

City of Rancho Cucamonga Communities

The section of the project area north of Foothill Boulevard in the City of Rancho Cucamonga includes neighborhoods adjacent to or within proximity of the freeway. These neighborhoods are established, as they were mostly constructed between the 1970s and 2000s. The most northern neighborhoods, such as East Avenue/Victoria Street, East Avenue/SR-210, and neighborhoods adjacent to the I-15 freeway and south of Duncan Canyon Road are largely comprised of single unit tract developments, with more than half considered upper-/middle-income residents. These neighborhoods appear to have community coherence.

Demographic characteristics presented in **Table 2-5** show that all neighborhoods within the study area communities have high rates of Hispanic and other minority populations. The City of Rancho Cucamonga has the highest rate of population over 64 years of age and the lowest rate under 18 among the cities in the project area. However, in general, Census Block Groups representing the communities within the study area have even higher rates of population age 18 years or less and lower rates of population older than 64.

Other neighborhoods south of Foothill Boulevard, such as Etiwanda Avenue/Arrow Route, similar to nearby neighborhoods in the City of Ontario, are primarily made up of small to medium-sized apartment complexes.¹ Census Block Group 22.07-2 located within the community at the southern limits of the City, and east of the freeway, has a very low percentage on both ends of the spectrum. According to **Table 2-5**, this block group is located in an area where 88.72 percent of the housing units are renter occupied.

¹ Neighborhood information was obtained from websites such as Neighborhood Scout (<http://www.neighborhoodscout.com/>) and City Data (<http://www.city-data.com/>). Accessed March 2017.

Table 2-5. Housing Profile

Geography		Total Housing Units	Occupied Units		Vacant Units		Owner-Occupied Units		Renter-Occupied Units		Average Household Size
			Total	% of Total Housing	Total	% of Total Housing	Total	% of Total Occupied	Total	% of Total Occupied	
County											
Riverside (Riv)		810,426	690,388	85.2	120,038	14.8	453,356	65.7	237,032	34.3	3.24
San Bernardino (SBd)		703,737	607,604	86.3	96,133	13.7	370,032	60.9	237,572	39.1	3.34
City											
Eastvale (Riv)		13,590	13,050	96.0	540	4.0	10,245	78.5	2,805	21.5	4.24
Jurupa Valley (Riv)		26,361	24,684	93.6	1,677	6.4	16,021	64.9	8,663	35.1	3.91
Ontario (SB)		49,093	45,680	93.0	3,413	7.0	24,991	54.7	20,689	45.3	3.64
Rancho Cucamonga (SBd)		57,798	55,410	95.9	2,388	4.1	35,388	63.9	20,022	36.1	3.01
Fontana (SBd)		52,036	49,438	95.0	2,598	5.0	32,413	65.6	17,025	34.4	4.06
Census Block Group Study Area in Cities within the Project Area											
Eastvale	406.07-1	1,182	1,132	95.77	50	4.23	816	72.08	316	27.92	4.27
Eastvale/ Jurupa Valley	406.07-2	1,401	1,254	89.51	147	10.49	433	34.53	821	65.47	2.96
Jurupa Valley	406.04-1	410	410	100	0	0	368	89.76	42	10.24	4.25
	406.04-2	548	548	100	0	0	472	86.13	76	13.86	3.83
	406.04-3	495	495	100	0	0	435	87.88	60	12.12	3.65
Ontario	19.03-1	2,598	2,127	81.87	471	18.13	1,456	68.45	671	31.55	3.21
	19.06-1	1,163	1,105	95.01	58	4.99	1,042	94.3	63	5.7	3.67
	21.09-1	1,870	1,585	84.76	285	15.24	274	17.29	1311	82.71	2.51
	127-1	2,598	653	87.53	471	12.47	448	68.61	205	31.39	3.35
	127-2	677	677	100	0	0	634	93.65	43	6.35	3.35

Table 2-5. Housing Profile (continued)

Geography		Total Housing Units	Occupied Units		Vacant Units		Owner-Occupied Units		Renter-Occupied Units		Average Household Size
			Total	% of Total Housing	Total	% of Total Housing	Total	% of Total Occupied	Total	% of Total Occupied	
Rancho Cucamong	20.22-1	1,152	1,114	96.7	38	3.3	1,091	97.94	23	2.06	3.84
	20.22-2	2,205	2,167	98.28	38	1.72	1,973	91.05	194	8.95	3.84
	20.33-1	1,631	1,631	100	0	0	1,120	68.67	511	31.33	3.12
	20.33-2	903	868	96.12	35	3.88	661	76.15	207	23.85	3.52
	20.34-1	2,209	2,209	100	0	0	1,581	71.57	628	28.43	3.32
	20.34-2	2,774	2,688	96.9	86	3.1	1,473	54.8	1,215	45.2	2.83
	20.35-1	1,491	1,409	94.5	82	5.5	1,021	68.48	388	31.52	2.69
	20.36-1	3,807	3,537	92.91	270	7.09	738	20.87	2,799	79.13	2.53
	21.10-1	3,445	3,077	89.32	368	10.68	347	11.28	2,730	88.72	2.35
	22.07-1	596	543	91.11	53	8.89	101	18.6	442	81.4	3.62
	22.07-2**	--	--	--	--	--	--	--	--	--	--
Fontana	20.10-1	1,237	1,211	97.9	26	2.1	1,042	86.04	169	13.96	3.94
	20.10-2	606	577	95.21	29	4.79	500	86.66	77	13.34	4.05
	20.10-3	794	745	93.83	49	6.17	649	87.11	96	12.89	4.35
	20.37-1	253	253	100	0	0	204	80.63	49	19.37	3.64
	20.37-2	608	608	100	0	0	529	87.01	79	12.99	3.73
	20.37-3	1,291	1,291	100	0	0	1,069	82.8	222	17.2	3.78
	20.38-1	791	791	100	0	0	628	79.39	145	20.6	3.78
	20.38-2	685	657	95.91	28	4.09	529	80.52	128	19.48	4.16
	22.04-1*	256	256	100	0	0	67	26.17	133	73.83	4.56
	22.04-2*	451	412	91.35	56	8.64	181	43.93	231	56.07	4.06
	22.04-3*	913	849	93	39	7	569	67.02	280	32.98	4.61
	23.04-2	2,607	2,550	97.81	57	2.19	1,996	78.27	554	21.73	4.08
	27.04-2	727	1,991	90.09	43	9.91	1,767	88.75	224	11.25	4.01
	92.02-1*	746	549	74.49	93	25.51	469	85.43	80	14.57	2.59
Notes: * Located within the boundaries of the City of Fontana and San Bernardino County Unincorporated Area.											
** Data not available											
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, 2017.											

Hispanic and minority groups in the study area are comparable to the overall city population. However, the Census Block Groups in the southern section of the community study area show a higher rate of Hispanic and minority populations.

City of Fontana Communities

Communities in the study area within the City of Fontana are mostly in the eastern and northern parts of the project limits north of Foothill Boulevard. These neighborhoods are established, as they were mostly constructed between the 1970s and 2000s. The northern neighborhoods adjacent to the I-15 freeway within the project area, such as in the areas north of Miller Avenue, and north of Baseline Road in northern Fontana, have largely single unit residential tract developments, with more than half considered upper-/middle-income residents. These neighborhoods appear to have community coherence. Neighborhoods just north of Foothill Boulevard in the project area are primarily made up of small- to medium-sized apartment complexes, similar to nearby neighborhoods in the City of Ontario and Rancho Cucamonga in the project area.

Data indicates that the population in these neighborhoods follow the overall trend of the City of Fontana population age distribution. The 18 to 64 age group in most of the Census Block Groups of the community study area is approximately 65 percent of the total population; under 18 years of age is approximately 25 to 30 percent of the total population. However, Block Group 22.04-1 has a higher percentage of its population over 64 years of age. The ethnic compositions of the communities in the study area represent a mixture of ethnic groups, with Hispanic or Latino populations being the largest ethnic group within most of the Census Block Groups. The white population percentage is higher within the Census Block Group of the unincorporated area of San Bernardino County. The black population represents the largest group within Block Group 20.38-2 in the study area. The majority of the population in Census Block Group 22.04-1 is Hispanic. Overall, race and ethnic distribution in block groups within the community study area is comparable to that of San Bernardino County, but the Hispanic population and minority population in the communities within the study area are lower than they are in the City of Fontana, where the minority population is 76.45 percent and the Hispanic population is 66 percent of the city's population.

Housing Characteristics

Housing characteristics, including ownership, occupancy, and household size, were used to describe character and cohesion of communities in the study area. **Table 2-5** shows that cities within the project area have a higher average household size than that of the counties in which they are located. Similarly, many of the block groups within the study area have a household size higher than the counties where they are located. Few block groups have a lower household size than average. These include Census Block Groups 20.34-2 and 21.10-1 in the City of Rancho Cucamonga communities study area, 21.09-1 in the City of Ontario communities study area, 92.02-1 in the unincorporated area of San Bernardino County, and 406.07-2 in the communities study area of the cities of Jurupa/Eastvale.

In general, there is a much higher percentage of occupied housing units in the communities in the study area block groups compared to the counties, with a similar percentage to the cities represented in the study area. Vacancy rates are above average in Census Block Groups 19.03-1

and 21.09-1 in the City of Ontario communities study area. Higher vacancy rates also exist in the Census Block Group in the unincorporated area of San Bernardino County. Almost all of the communities in the study area Census Block Groups show a very high rate of owner-occupied housing units, with the exception of Census Block Groups 21.09-1, 21.10-1, 22.07-1, and 406.07-2. This is a result of the large numbers of apartment rental units south of Foothill Boulevard and close to the I-15 corridor in the communities within the cities of Rancho Cucamonga and Ontario.

Census Block Groups in the City of Jurupa Valley community study area have an average household size similar to the overall city average of 3.91. The only exception is the Census Block Group shared with the City of Eastvale, which has a household average size of 2.96. This block group also has a higher percentage of renter-occupied housing than the other Census Block Groups in the community.

In the communities within the study area of the City of Ontario, average household size in the census tract block groups vary, but are within a close range of the city average household size of 3.64. The only exception is Census Block Group 21.09-1, located just north of I-10. This Census Block Group also has a high percentage of renter-occupied housing.

In the communities within the study area of the City of Rancho Cucamonga, average household size in most of the Census Block Groups is similar or slightly higher than the city average of 3.01. Census Block Groups 21.10-1 and 20.36-1, which are in an area with high percentage of renter-occupied housing units, have smaller household average sizes.

In the communities within the study area in the City of Fontana, household size in the Census Block Groups varies, with a range from 3.64 to 4.61, which is approximately similar to the city average of 4.06. The only exception is Census Block Group 92.02-1, which is mostly in an unincorporated area of San Bernardino County, with an average household size of 2.59.

Community Facilities and Services

Community facilities provide services that the population depends on for its welfare and also can contribute to community cohesion. Transportation projects' direct and indirect effects on community facilities can extend beyond the immediate project vicinity and can be evaluated by how they affect accessibility to facilities and services.

Table 2-6 lists the community facilities and services located within approximately two miles of the project corridor that may be affected directly or indirectly by the project construction activities. **Figure 2-12** shows the location of these facilities and services. The list includes medical centers, schools, places of worship, fire stations, police and CHP stations, post offices, libraries, parks, wineries, and community/cultural centers. Several schools, places of worship, and parks are located within the half-mile study area. This figure shows a concentration of the community services and facilities within the northern part of the project limits in the communities located within the cities of Rancho Cucamonga and Fontana.

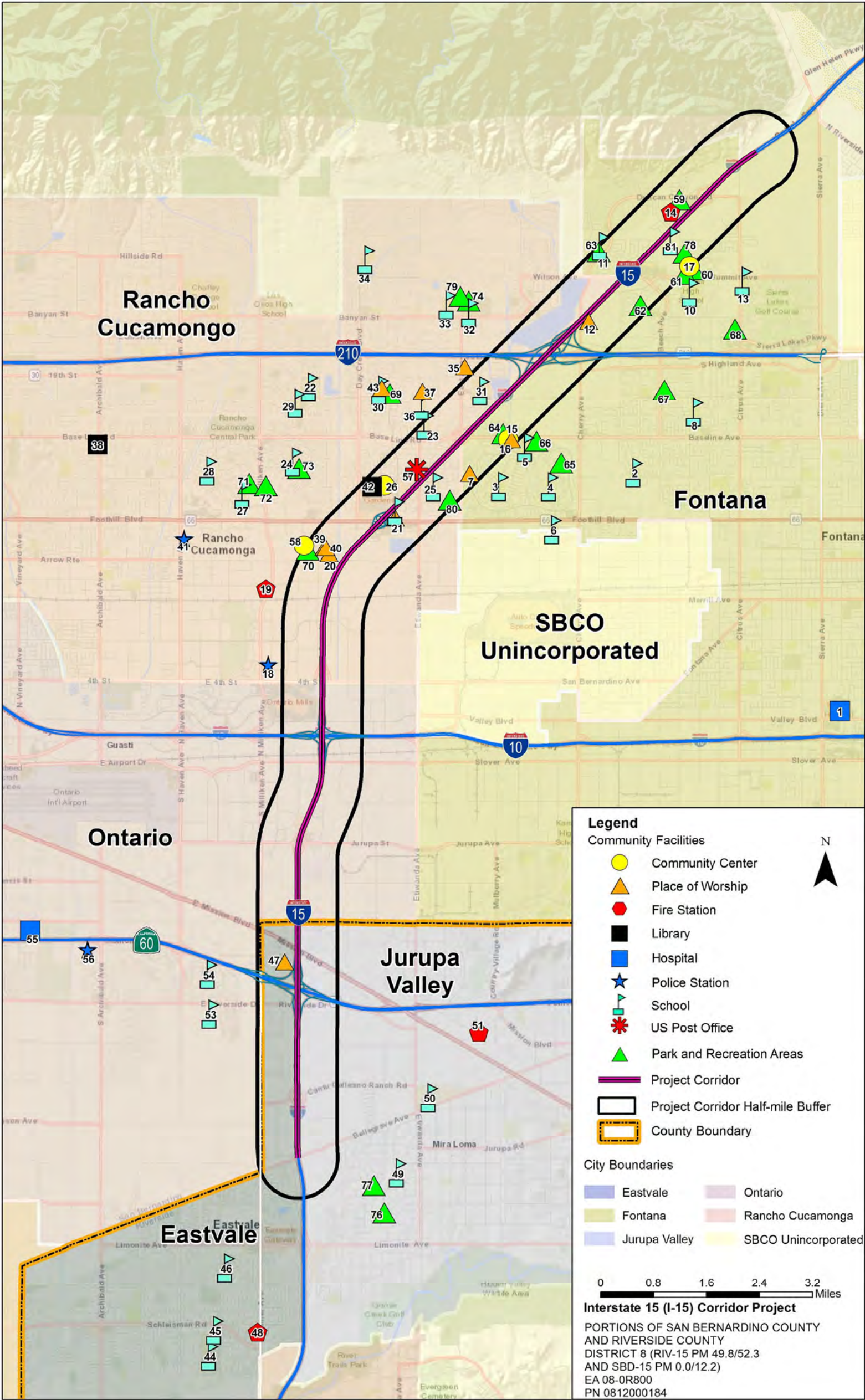
Table 2-6. Community Facilities and Services

Map ID No.	Name	Location	City
Community Centers			
26	Victoria Gardens Cultural Center	12505 Cultural Center Drive	Rancho Cucamonga
58	Animal Care and Adoption Center	11780 Arrow Route	Rancho Cucamonga
17	Fontana Park Community Center	15556 Summit Avenue	Fontana
15	Heritage Neighborhood Center	7350 West Liberty Parkway	Fontana
Places of Worship			
47	Mira Loma Assembly of God	10281 54 th Street	Eastvale
20	Crossroads Community Church	8020 Citrus Avenue	Rancho Cucamonga
21	Sacred Heart Roman Catholic Church	12704 Foothill Boulevard	Rancho Cucamonga
35	Saint Claire of Assisi Church	6563 East Avenue	Rancho Cucamonga
37	The Church of Jesus Christ of Latter-Day Saints	6829 Etiwanda Avenue	Rancho Cucamonga
39	Neighborhood Vineyard Church	11966 Jack Benny Drive, Suite 104	Rancho Cucamonga
40	Grace Bible Church of Rancho	9774 Hawthorne Drive	Rancho Cucamonga
43	Etiwanda Community Church	7126 Etiwanda Avenue	Rancho Cucamonga
7	Water of Life Community Church	8440 Nuevo Avenue	Fontana
12	Victoria Community Church	6101 Cherry Avenue	Fontana
16	Summit Bible Church	7350 West Liberty Parkway	Fontana
Schools			
44	Eleanor Roosevelt High School	7447 Scholar Way	Eastvale
45	Eastvale Elementary School	13031 Orange Street	Eastvale
46	Harada Elementary School	12884 Oakdale Street	Eastvale
49	Sky Country Elementary	5520 Lucretia Avenue	Jurupa Valley
50	Jurupa Valley High School	10551 Bellegrave Avenue	Jurupa Valley
54	Colony High School	3850 East Riverside Drive	Ontario
55	Creek View Elementary	3742 Lytle Creek North Loop	Ontario
22	Rancho Cucamonga High School	11801 Lark Drive	Rancho Cucamonga
23	Grapeland Elementary School	7171 Etiwanda Avenue	Rancho Cucamonga
24	Tetra Vista Elementary School	7497 Mountain View Drive	Rancho Cucamonga
25	Perdue Elementary School	8677 Archibald Avenue	Rancho Cucamonga
27	Coyote Canyon Elementary School	7889 Elm Avenue	Rancho Cucamonga
28	Ruth Musser Middle School	10789 Terra Vista Parkway	Rancho Cucamonga
29	Carlton P. Lightfoot Elementary School	6989 Kenyon Way	Rancho Cucamonga
30	Windrows Elementary School	6855 Victoria Park Lane	Rancho Cucamonga
31	Etiwanda High School	13500 Victoria Street	Rancho Cucamonga
32	Summit Intermediate Junior High School	5959 East Avenue	Rancho Cucamonga
33	Etiwanda Colony Elementary School	5959 East Avenue	Rancho Cucamonga
34	Day Creek Intermediate School	12345 Coyote Drive	Rancho Cucamonga
36	Etiwanda Intermediate School	6925 Etiwanda Avenue	Rancho Cucamonga
21	Sacred Heart Parish School	12676 East Foothill Boulevard	Rancho Cucamonga
2	Hemlock Elementary School	15080 Miller Avenue	Fontana
3	West Heritage Elementary School	13690 West Constitution Way	Fontana
4	East Heritage Elementary School	14250 East Constitution Way	Fontana
5	Heritage Intermediate School	13766 South Heritage Circle	Fontana
6	Almond Elementary School	8172 Almond Avenue	Fontana

Table 2-6. Community Facilities and Services (continued)

Map ID No.	Name	Location	City
8	Grant Elementary School	7069 Isabel Lane	Fontana
10	Summit High School	15551 Summit Avenue	Fontana
11	David Long Elementary School	5383 Bridlepath Drive	Fontana
13	Sierra Lakes Elementary School	5740 Avenal Place	Fontana
81	Falcon Ridge Elementary School	5470 Lytle Creek Road	Fontana
Emergency Services and Facilities			
48	Eastvale Fire Station	7067 Hamner Avenue	Eastvale
51	Riverside County Fire Dept. Station 17	10400 San Sevaine Way	Jurupa Valley
56	Ontario City Police Department	2500 South Archibald Avenue	Ontario
55	Kaiser Permanente Ontario Medical Center	1025 West I Street	Ontario
18	California Highway Patrol	9530 Pittsburgh Avenue	Rancho Cucamonga
19	Rancho Cucamonga Fire Station 174	11297 Jersey Road	Rancho Cucamonga
41	San Bernardino County Sheriff's Department	10510 Civic Center Drive	Rancho Cucamonga
14	San Bernardino County Fire Station 79	5075 Coyote Canyon Road	Fontana
Libraries			
52	Glen Avon Library	9244 Galena Street	Jurupa Valley
38	Archibald Library	7368 Archibald Avenue	Rancho Cucamonga
42	Paul A. Baine Library	12505 Cultural Center Drive	Rancho Cucamonga
Parks and Recreation and Others			
76	Laramore Park	5551 Trail Canyon Drive	Jurupa Valley
77	Wineville Park	5211 Wineville Avenue	Jurupa Valley
80	Garcia Park	13150 Garcia Drive	Rancho Cucamonga
69	Windrows Park	6849 Victoria Park Lane	Rancho Cucamonga
70	Adults Sports Park	8400 Rochester Avenue	Rancho Cucamonga
71	West Greenway Park	7756 Meadowcrest Court	Rancho Cucamonga
72	Milliken Park	7699 Milliken Avenue	Rancho Cucamonga
73	Mountain View Park	11701 Terra Vista Parkway	Rancho Cucamonga
74	Etiwanda Creek Park	5939 East Avenue	Rancho Cucamonga
79	Etiwanda Creek Community and Dog Park	5939 East Ave	Rancho Cucamonga
65	Circle Park	Caryn Circle	Fontana
66	McDermott Park	7846 South Heritage Loop	Fontana
67	Dr. Charles Koehler Park	Walnut Street	Fontana
59	Coyote Canyon Park	5065 Coyote Canyon Road	Fontana
63	San Sevaine Park	5355 Cherry Avenue	Fontana
62	Rosena Park West	15057 Grays Peak	Fontana
64	North Heritage Park	1736 North Heritage Circle	Fontana
61	Jessie Turner Center	15556 Summit Avenue	Fontana
60	Fontana Park Aquatic Center	15610 Summit Avenue	Fontana
68	Fontana North Skate Park	5553 Lytle Creek Road	Fontana
57	U.S. Post Office	7615 Etiwanda Avenue	Rancho Cucamonga
Source: I-15 CP Community Impact Assessment, October 2017.			

Figure 2-12. Community Facilities and Services



Source: I-15 CP Community Impact Assessment, October 2017.

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There are four fire stations within approximately two miles of the project corridor that represent several jurisdictions, including the County of San Bernardino, City of Rancho Cucamonga, City of Eastvale, and City of Jurupa Valley. These stations provide a variety of emergency services including fire, medical, and hazardous material. San Bernardino County Fire Station 79, in the northern area of the City of Fontana, provides paramedic and fire services to northern Fontana residents and business owners, as well as responding to incidents within the urban/wildland borders, including Lytle Creek and the I-15 corridor. The CHP is responsible for patrolling the freeways and unincorporated roadways and highways. The CHP and Caltrans take the lead in handling transportation emergency incidents resulting from hazardous material. In addition, local jurisdictions typically have several private ambulance companies that provide emergency transportation services.

Communities are served by the city police department stations and offices at various locations within city limits. Police protection services for the cities of Eastvale and Jurupa Valley are contracted with the Riverside County Sheriff's Department. Ontario City Police Department, San Bernardino County Sheriff's Department, and Rancho Cucamonga CHP offices are located within the study area of community services and facilities.

Public Transit

Public transportation in the region where the project area is located is provided by OmniTrans, VVTA, and the RTA. OmniTrans is the public transit agency serving the San Bernardino Valley region. In addition to regular bus operations, OmniTrans offers services for individuals with disabilities. OmniTrans routes cross the project location at Jurupa Avenue (Route 82), I-10 (Route 290), Fourth Street (Route 61), Foothill Boulevard (Route 66), and Baseline Road (Route 67). Major destinations points for these routes include schools, colleges, hospitals, regional shopping centers, such as Ontario Mills and Victoria Gardens, as well as regional transit centers located in Fontana, Ontario, and Montclair and the Metrolink stations in Fontana, Rancho Cucamonga, and Montclair. OmniTrans does not include bus routes in the FY2015–FY2020 Short-Range Transit Plan to operate freeway Express Lanes on I-15. Coordination with the OmniTrans staff confirmed that no future plans are anticipated to establish bus routes using the proposed I-15 Express Lanes.

VVTA provides bus service in the High Desert area, with one fixed route providing service to downtown San Bernardino and Fontana. Route 15 operates along I-215, I-10, and Sierra Avenue. It connects to multiple OmniTrans Routes in conjunction with stops at the San Bernardino and Fontana transit centers, Arrowhead Medical Center and Kaiser Hospital in Fontana, and also connects to the Metrolink stations in San Bernardino and Fontana. The VVTA Report for a Comprehensive Operational Analysis and Short-Range Transit Plan FY2017–FY2019 does not include plans for bus service on I-15. Coordination with VVTA staff in February 2017 that included phone calls and email correspondence confirmed that a bus route along I-15 is not considered in VVTA future plans.

RTA provides transit services to the Cities of Eastvale and Jurupa Valley. RTA's fixed routes have been designed to establish transportation connections between all cities and unincorporated communities in western Riverside County. RTA also provide bus routes that connect with locations in downtown Fontana and Ontario Mills Mall in San Bernardino County. The RCTC

supports a number of specialized transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities. RTA witnessed an increase in the commuter market in Riverside County. Analysis for the Short-Range Transit Plan FY2017–FY2019 reveals intentions to target major trip generators such as train stations and colleges and universities. Several new express routes are proposed along SR 91.2

Bus service along I-15 may be considered in RTA’s future plans, as indicated from coordination with RTA staff (see Appendix A for copies of correspondence with RTA). There is one major mobility hubs along the I-15 project corridor, which is the planned Mobility Hub at Amazon Eastvale (Cantu-Galleano Ranch Road and Goodman Way). This facility is expected to be completed by January 2018, with bus routes 3 and 29 terminating at this location. These routes link the cities of Norco, Corona, Eastvale, and Jurupa Valley utilizing local roads. Because the proposed transit centers are solely within Riverside County, any potential future plans to establish bus routes using the I-15 corridor would be coordinated with RCTC. This project would not preclude establishing bus routes on I-15 that connect to these transit centers.

Economic Conditions

Employment and Income

According to the 2014 U.S. Census, approximately 955,215 persons were engaged in the civilian labor force in San Bernardino County, of which approximately 822,440 were employed and 132,775 were unemployed, resulting in an unemployment rate of 13.9 percent.

Table 2-7 presents the 2014 labor force, unemployment, and per capita income statistics for the study area and each jurisdiction. As the table shows, the cities of Rancho Cucamonga and Eastvale have the lowest unemployment rates (10.6 percent and 11.5 percent, respectively) and the City of Jurupa Valley has the highest (17.4 percent). When comparing the study area Census Block Groups to these statistics, the study area generally is consistent with Rancho Cucamonga and Eastvale having lower levels of unemployment with a few outlier Census Block Groups (i.e., 20.33-2 in Rancho Cucamonga and 406.07-2 in Eastvale). However, the study area Census Block Groups in Jurupa Valley have lower unemployment percentages and higher per capita incomes than that of the City of Jurupa Valley, suggesting the populations in the portion of the study area within the City of Jurupa Valley are more similar to their neighboring populations in Eastvale and Fontana. Note that these rates are census estimates and represent reported conditions over an average of five years from 2010 through 2014. The study area Census Block Groups have generally lower unemployment than San Bernardino County, Riverside County, or the corridor cities that contain them. In addition, the study area Census Block Groups’ per capita incomes are similar or higher than those of the county or the cities that contain them. The study area Census Block Groups within the City of Rancho Cucamonga have particularly high per capita incomes compared to the rest of the study area and compared to the City of Rancho Cucamonga as a whole. However, Census Block Group 22.07-2 in Rancho Cucamonga as well as Census Block Group 22.04-1 in Fontana have particularly low per capita income compared to their respective cities and to the study area.

² <http://www.riversidetransit.com/images/stories/DOWNLOADS/PUBLICATIONS/SRTPS/FY2017-2019%20SRTP.pdf>. Accessed April 2017.

Table 2-7. Labor Force, Unemployment, and Per Capita Income

Jurisdiction/Census Block Group	Population 16 years and Over	Percentage in Labor Force	Percentage Unemployed	Per Capita Income	Individuals with Income Below Poverty Level		Median Household Income	
					(%)		(\$)	
County								
Riverside (Riv)	1,723,410	60.9	14.3	23,660	16.9		56,592	
San Bernardino (SBd)	1,565,925	61	13.9	21,384	19.2		54,100	
City								
Eastvale (Riv)	39,198	69.3	11.5	28,687	5.1		109,783	
Jurupa Valley (Riv)	72,691	64.9	17.4	18,579	16.9		55,898	
Ontario (SBd)	125,911	66.8	13	18,601	18.3		54,156	
Rancho Cucamonga (SBd)	134,252	68.6	10.6	31,528	7.8		77,061	
Fontana (SBd)	147,141	66.3	14.6	19,685	16		64,995	
Census Block Group Study Area in Cities within the Project Area								
Eastvale	406.07-1		3,509	68	5.3	27,173	5.21	117,750
Eastvale / Jurupa Valley	406.07-2		2,800	60	13.4	26,507	9.73	63,468
Jurupa Valley	406.04-1		1,275	68.5	10.1	26,534	12.31	104,650
	406.04-2		1,513	61.9	8.9	23,429	16.35	87,812
	406.04-3		1,580	63	9.3	24,884	7.49	80,347
Ontario	19.03-1		4,959	75.3	9	30,902	6.58	89,750
	19.06-1		3,008	75.6	7.4	30,884	5.3	107,734
	21.09-1		2,953	82.2	7.8	26,928	7.88	57,284
	127-1		1,485	73.4	10.1	22,377	29.95	61,875
	127-2		1,780	72.6	8.4	28,775	3.83	90,551
Rancho Cucamonga	20.22-1		3,537	70.5	4.7	40,222	1.43	120,333
	20.22-2		5,860	68.7	5.3	44,369	1.53	140,063
	20.33-1		3,796	66.7	7.5	28,668	4.87	78,598
	20.33-2		2,156	80.5	13.6	29,353	2.19	93,854
	20.34-1		5,300	77.4	5.2	36,383	1.87	102,686
	20.34-2		5,917	66.2	8.1	34,099	1.1	73,893
	20.35-1		3,057	72.5	5.3	35,154	4.57	95,438
	20.36-1		6,896	68.4	5.9	34,114	8.28	65,484
	21.10-1		5,704	74.2	9.8	26,419	16.57	54,715
	22.07-1		1,496	68.6	7.6	20,958	23.16	60,625
	22.07-2**		2,809	0	0	2,471	**	**
Fontana	20.10-1		3,478	79.1	6.8	29,988	5.74	102,650
	20.10-2		1,740	77.4	10.7	36,520	3.34	116,146
	20.10-3		2,389	71.7	4.1	32,753	1.46	124,861
	20.37-1		697	79.2	15.4	30,598	1.96	105,625
	20.37-2		1,753	77.9	13.7	22,770	5.62	82,143
	20.37-3		3,575	77.4	10.7	26,538	10.79	92,917
	20.38-1		2,502	71.8	13.8	25,865	0	96,033
	20.38-2		2,346	71.1	22.4	24,908	4.46	84,716

Table 2-7. Labor Force, Unemployment, and Per Capita Income (continued)

Jurisdiction/Census Block Group	Population 16 years and Over	Percentage in Labor Force	Percentage Unemployed	Per Capita Income	Individuals with Income Below Poverty Level		Median Household Income	
					(%)		(\$)	
	22.04-1*		655	59.4	12.8	9,640	41.04	31,250
	22.04-2*		1,165	72.8	16.7	15,954	6.57	55,000
	22.04-3*		2,813	65.7	14.5	14,328	16.81	58,377
	23.04-2		7,134	72	7.3	27,089	3.16	93,379
	27.04-2		5,855	72.9	9.2	29,222	8.09	108,405
	92.02-1		1,145	65.2	8.5	34,907	9.66	52,841
* Located within the boundaries of the City of Fontana and San Bernardino County Unincorporated Area.								
** Data not available.								
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, compiled by ICF, 2016.								

Given the relatively high unemployment rate within San Bernardino County and Riverside County, employment opportunities in the region have been limited over the 5-year period (2010 – 2014) for which Census data is available. As discussed in Section 2.2.1, there are several planned large-scale commercial, mixed use and industrial developments in the Cities of Fontana, Ontario, and Eastvale which would present future employment opportunities. In addition, there should be adequate available housing in the region as housing vacancy rates in these cities are approximately 5.0 percent, 7.0 percent, and 4.0 percent, respectively.

American Community Survey commute pattern data show that the residents of the region and study area are heavily reliant on personal vehicles. As shown in **Table 2-8**, a majority of commuters in both San Bernardino County and Riverside County drive alone, as 77.8 percent and 77.0 percent of workers residing in these counties drive alone, respectively. The aggregate of the study area Census Block Groups exhibit similarly high levels of single-passenger commuters with approximately 78.4 percent of commuters in the study area who drive alone. Transit use is low throughout the region with commuter transit use ranging from 1.3 percent to 2.3 percent depending on the geography. Study area workers have a low reliance on transit, with approximately 1.8 percent of workers within the study area identifying as using transit for commutes.

Table 2-8. Commute Mode

Jurisdiction/Geography	Total Workers	Percentage who Drive Alone	Percentage who Carpool	Percentage who Use Transit	Percentage who Use Another Mode or Work at home
Riverside County	898,639	77.0	13.3	1.4	8.3
San Bernardino County	816,403	77.8	13.3	1.7	7.2
Eastvale	24,091	75.9	16.7	1.4	6.0
Jurupa Valley	38,805	79.1	14.6	1.3	5.1
Ontario	73,556	77.2	14.7	2.3	5.8
Rancho Cucamonga	79,599	78.9	13.2	1.6	6.2
Fontana	83,724	78.8	13.9	2.1	5.2
Study Area	66,875	78.4	13.7	1.8	6.0
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, 2017.					

Table 2-9 shows the commute times for workers in the region and in the study area. Commute time for workers in San Bernardino County and Riverside County were more than 30 minutes for approximately 41.7 percent and 46.5 percent of workers, respectively. The corridor cities all have somewhat similar commuter characteristics, with the exception of Eastvale, which has a higher proportion of residents spending more than 30 minutes (70.2 percent) and those spending more than an hour (29.4 percent) to commute. This may indicate limited employment opportunities within Eastvale, causing workers to commute longer distances. Within the study area, approximately half of commuters spend at least 30 minutes commuting. The study area also displays a high proportion of residents who spend over an hour commuting, with approximately 20.1 percent indicating commutes of this length, which is higher than for Riverside County and San Bernardino County overall.

Table 2-9. Commute Time

	Total:	<10 Mins	10 -19 Mins	20-29 Mins	30-45 Mins	45-59 Mins	>60 Mins
Riverside County	851,603	9.6	26.3	17.6	19.8	9.1	17.7
San Bernardino County	782,050	10.9	28.1	19.4	18.5	8.3	14.9
Eastvale	22,812	2.3	15.0	12.4	26.8	14.0	29.4
Jurupa Valley	37,735	6.2	28.0	23.8	19.3	7.6	15.2
Ontario	71,552	7.8	29.5	21.0	20.0	7.3	14.3
Rancho Cucamonga	76,221	8.9	27.1	19.6	20.1	8.8	15.5
Fontana	80,709	6.5	24.0	23.8	21.0	7.1	17.6
Study Area	63,834	7.1	22.8	20.5	20.7	8.9	20.1

Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, 2017.

Business Activities

Major employers (5,000 to 9,999 employees) in the jurisdictions in the vicinity of the proposed project, as identified by the State of California Employment Development Department for San Bernardino County, are Kaiser Permanente in the City of Fontana and Ontario International Airport in the City of Ontario (California Employment Development Department 2016). Outside of the immediate study area, other major employers with at least 1,000 to 4,999 employees include the San Bernardino County Superintendent of Schools, Caltrans, and California State University, San Bernardino (California Employment Development Department 2016). On a broader scale, San Bernardino County is home to approximately 200 million square feet of warehouse facilities, and some of the largest wholesaling, retailing, and e-commerce companies have warehousing facilities in the county (SBCTA 2014). In Riverside County, the County of Riverside is another major employer, employing almost 22,000 people (Riverside County Economic Development Agency 2015).

Established businesses in the study area are generally located along both sides of I-15, particularly south of Baseline Road. According to the California Employment Development Department Labor Market Information, the largest industries in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area as of May 2016 are: Trade, Transportation, Utilities (24 percent); Government (17 percent); and Educational & Health Services (15 percent). **Table 2-10** shows the employment in each of the jurisdictions in 2012 as well as the projected employment for 2040, according to the SCAG's 2016-2040 RTP/SCS. Businesses in the study area dependent

Table 2-10. Employment, 2012 and 2040

Jurisdiction	Number of Jobs 2012	Number of Jobs 2040	Percentage Change 2012–2040
Riverside County	616,700	1,174,300	90
San Bernardino County	659,500	1,028,100	56
City of Eastvale	4,300	9,800	128
City of Jurupa Valley	24,500	32,600	33
City of Ontario	103,300	175,400	70
City of Rancho Cucamonga	69,900	104,600	50
City of Fontana	47,000	70,800	51

Source: SCAG. 2016–2040 RTP/SCS: Appendix, Current Context Demographics & Growth Forecast. Available: http://scagrtppscs.net/Documents/2016/draft/d2016RTPSCS_DemographicsGrowthForecast.pdf. Accessed: January 10, 2017.

upon I-15 access include major freight and goods movement businesses such as the FedEx Freight facility at the I-15/I-215 interchange, the Home Depot Regional Distribution Center in Fontana northeast of the I-15/I-10 interchange, and several other major distribution centers (Walmart, FedEx Freight, UPS Freight, and Costco) at the southern terminus of the project. These goods movement businesses are heavily reliant on the local highway network; however, each have access to several nearby highways in addition to I-15, including SR-60, I-10, and SR-91. Other major business centers in the study area include the Victoria Gardens shopping center in Rancho Cucamonga, the Ontario Mills Mall in Ontario, and the numerous auto dealerships along Jurupa Street in Ontario.

According to SCAG (2016b), among the cities, the City of Eastvale is projected to have the largest percentage growth in job creation, more than doubling over the next 28 years. By 2040, the City of Ontario would increase its number of jobs by the largest margin, with a projected increase of 72,100 jobs. The City of Rancho Cucamonga would also see substantial job growth by 2040, adding more than 34,700 new jobs to the area. Additionally, there would be a significant increase in employment opportunities in the City of Fontana, adding more than 23,800 new jobs.

Fiscal Conditions

The California Board of Equalization Report of Taxable Sales for the Third Quarter of 2014 indicates that total taxable sales for San Bernardino County were \$8,289,031,000, an increase of 7.6 percent from the previous year; total taxable sales for Riverside County were \$7,753,270,000, an increase of 7.0 percent from the previous year. Property taxes in the project area, within the limits of San Bernardino County, are collected by the San Bernardino County Auditor-Controller/Treasurer/Tax Collector. According to the San Bernardino County Comprehensive Annual Financial Report for the 2013/2014 fiscal year, the County of San Bernardino collected \$2,151,777,000 in property taxes (County of San Bernardino 2014b). Property taxes in the project area within the limits of Riverside County are collected by the Riverside County Treasurer. According to the County of Riverside Comprehensive Annual Financial Report for the 2013/2014 fiscal year, Riverside County collected \$297,107,000 in property taxes (County of Riverside 2014).

Toll Projects

Although SBCTA and RCTC have introduced the concept of toll roads and RCTC has one toll project in operation, and a second project, also on I-15, about to start construction, toll lanes, and the equity concerns associated with them, are still relatively new to residents and drivers who use the highway system within San Bernardino County, since an operational express lane facility has not yet been constructed in San Bernardino County. This section provides an assessment of the equity issues associated with the I-15 CP.

Equity Types

Because toll projects inherently require individuals to pay for the use of transportation facilities that are typically free, equity is a concern often raised by transportation agencies, lawmakers, and the general public. Equity can be applied in two distinct ways:

Horizontal equity describes the equal distribution of impacts (costs and benefits) across all individuals or groups that are considered equal in ability or need. In other words, the project should avoid favoring one individual or group over others and that all consumers should receive the same service if they provide the same payment.

Vertical equity, also known as outcome equity, refers to the distribution of impacts (costs and benefits) across social groups that differ in ability and/or need. More simply, people with less means should pay less or receive more benefit.

Horizontal and vertical equity are not mutually exclusive concepts; however, transportation agencies can choose to prioritize one over the other, depending on the context of the project and concerns from stakeholders. This analysis focuses on the horizontal equity presented by implementing dynamic pricing and the vertical equity concerns presented by the potential costs imposed on low-income drivers.

I-15 Corridor Characteristics

Both income and the transportation modes of roadway users are important considerations in the discussion of equity. As described in **Table 2-8**, median household income in San Bernardino County was reported to be \$54,100 per year, and approximately 19.2 percent of its population was below the poverty level, based on 2014 American Community Survey 5-year estimates. Riverside County reported a similar median household income of \$56,592 and a lower incidence of poverty, with approximately 16.9 percent of its population below the poverty level. Although there are exceptions, almost all of the Census Block Groups in the study area showed higher household incomes and lower levels of poverty than either San Bernardino County or Riverside County. Commute patterns in the region show a population that is heavily reliant on personal vehicles. As described in **Table 2-8**, approximately 77.8 percent of the workers in San Bernardino County drive alone, and approximately 41.7 percent of commuters spend at least 30 minutes commuting.

2.1.5.3 Environmental Consequences

No Build Alternative

The No Build Alternative would maintain the current freeway configurations, and would not provide improvements to the I-15 facility within the project limits. There would be no changes to access, circulation, or parking with this alternative. It is not anticipated that the project under the No Build Alternative would have direct or indirect impact on community character and coherence, housing, economic conditions, and community facilities and services.

Build Alternative

Temporary

Temporary impacts on circulation and access would result from construction activities that require mainline lane and ramp closures and detours. The Build Alternative would affect several existing structures along the facility. Many of the structures involve local road undercrossings. Work that requires full local roads and freeway closures, such as falsework and structure demolishing, would occur for short periods, mostly during non-peak commute hours, at night, or on weekends.

Preliminary detour routes would be designated and signed for all traffic during closures.

Temporary long-term detours would be needed to accommodate truck traffic that is unable to clear some bridges because of shortened bridge clearances from falsework and construction equipment and activities. Similarly, existing pedestrian and bicycle/trail facilities within the project limits, including the Pacific Electric Trail, are anticipated to be maintained during construction, except where the described arterial roadway closures occur during construction. Temporary closures and detours could have impacts on access to nearby businesses, access and delay of emergency services, circulation and access to community services and facilities, access and delay of transit services, and access to pedestrian and bicycle facilities. However, it is anticipated that impacts on businesses, communities, and community services to be minimal with the implementation of TMP prepared for the project and updated during construction. The TMP elements require the project to coordinate with local jurisdictions, law enforcement, and public service providers regarding efforts to lessen the temporary impacts due to construction activities. The public will be made informed and educated regarding such impacts by implementing a public information and awareness campaigns, establishing a stakeholders' taskforce that would be updated regularly regarding construction activities impacts, making available an up-to-date motorist information system that enables the motorists to make informed decisions about daily travel plans. The TMP also includes establishing and implementing an Incident Management system that utilizes the CHP and roadside services to minimize the potential for incidents during the closure and maintain the flow of traffic. Closures will be limited to nighttime or off-peak periods, and the closures and detour routes will be well identified for each for each full facility closure. Detour routes will avoid routing traffic through local streets in communities and neighborhoods that are adjacent to the closure to the extent possible.

In addition, a contingency plan would be prepared for high-impact closures. The plan would identify operations, equipment, processes, and materials that may fail and cause delayed opening of lane closures. The plan would also identify key operational decision points, with a timeline listing the expected completion time of each critical path activity, and describe any and all standby equipment and secondary material suppliers available to complete the operations in the event of equipment failure or unexpected loss of material. The plan would identify the lines of

communication and contact information for, the contractor's project manager, Caltrans project inspector, CHP Area Commander, and any other involved personnel.

Permanent

Community Character and Cohesion

The project would not adversely impact community character or cohesion. The demographic and housing characteristics of the study area indicate a high level of community cohesion, particularly within the northern section of the project limits. However, neighborhoods exist mostly on one side of the freeway or the other. The freeway is elevated within most of the study corridor, and neighborhoods are connected with local roads. The freeway presents an existing visual barrier that discourages the establishment of a sense of community across the facility. The project would not create a new barrier between communities, and community cohesion would not be changed as a result of the project. The Build Alternative would require the widening of undercrossing bridge structures to provide for the added Express Lanes. The widening would not affect local streets and the connectivity of neighborhoods. The project would widen the freeway within the existing right of way, and would not require the acquisition or relocation of residential or business properties. The project area is considered to be highly urbanized, and the project would not result in increased urbanization of the communities in the project area. There would be no impacts on parking as a result of the project. Additional noise impacts may result from the project. However, the project would provide noise attenuation measures where needed to avoid and minimize noise impacts on the affected communities. Noise attenuation measures are described in **Section 2.2.7** of this document.

The project would not have impacts on land use and would not affect housing types. It is not anticipated that the improvements provided by the project would affect housing tenure and vacancies, nor would they affect household size. The project would not create the need for additional housing in the project area.

Community Facilities and Services

A project can be disruptive to community cohesion if it has direct or indirect effects on the community facilities and services. The project would not affect existing community facilities. There would be no change to community services and facilities. The project would improve traffic conditions in the general travel lanes and overall mobility in the project area.

Economic Conditions

The project would not result in any business acquisitions or relocations, and would include changes that affect access to existing businesses. The project would not affect directly or indirectly the economic conditions and employment in the project area. The proposed project would not require the permanent closure or modification of any existing ramps or the construction of any new ramps, and would not have any impacts on business activities and viability in the project area. Property tax revenues and fiscal conditions would remain unaffected. Based on the project's financing plans, a portion of the project would be funded using sales tax revenues. While toll revenues generated by the project would generally be dedicated to paying operations and maintenance, as well as interest on toll revenue bonds, excess toll revenues may be used to repay sales tax funds used for construction of the project or

potentially used to fund additional transportation improvements in the region. The project would have no adverse effect on fiscal conditions.

Income-Based Equity Impacts

Regarding horizontal equity, low-income drivers who use the Express Lanes may experience some cost burdens associated with the proposed project. For example, beyond the cost of the tolls themselves, there are costs associated with acquiring the needed transponders as well as account maintenance fees and minimum balance requirements. In addition, low-income individuals, particularly those who are paid in cash, may not possess bank accounts or the credit cards needed to open and maintain toll accounts. These “unbanked” individuals would be unable to utilize the Express Lanes based on how tolls would be collected, which presents potential inequity concerns.

Surveys from elsewhere in the region regarding the SR-91 express lanes in Orange County indicate users from all income groups use the express lanes, albeit drivers from lower-income households use the express lanes in lower numbers than those in higher income groups, with drivers from households with incomes of \$25,000 or less representing two percent of survey respondents in 2014 and drivers from households with incomes between \$25,000 and \$50,000 representing 6.5 percent of respondents. Although the findings from the Orange County SR-91 express lanes represent a different part of the region and are limited to express lane users specifically, and do not compare the likelihood of people in each income range using the express lanes versus the GP lanes, patterns similar to those for the Orange County SR-91 express lanes are expected to emerge with implementation of the proposed project, as some drivers from lower-income households are expected to use the Express Lanes, but not likely to the extent of those from higher-income households. The project would employ a dynamic pricing system wherein tolls are charged based on the amount of congestion on I-15. This system would achieve what is called market equity because everyone using the Express Lanes would pay a market-based toll, which ties the charges to the amount of congestion the user is paying to avoid. An important factor to consider is that use of the Express Lanes is completely optional, and use of the GP lanes would be free. One of the primary purposes of the project is to provide a reliable travel option to drivers so that individuals who need to quickly travel the length of the I-15 corridor can pay to use the Express Lanes and be assured they can reach their destination in a specified amount of time; projections of the amount of time that it would take to travel the corridor during peak hours in each direction for the Express Lanes and GP lanes are shown in **Table 2-11**.

Regarding vertical equity, low-income drivers who use the Express Lanes may experience some cost burdens associated with the proposed project. For example, beyond the cost of the tolls themselves, there are costs associated with acquiring the needed transponders as well as account maintenance fees and minimum balance requirements. In addition, low-income individuals, particularly those who are paid in cash, may not possess bank accounts or the credit cards needed to open and maintain toll accounts. These “unbanked” individuals would be unable to use the Express Lanes based on how tolls would be collected, which presents potential inequity concerns.

Table 2-11. Travel Time

Hour	Facility	Segment	Distance (mi)	Travel Time (min)						
				Existing	2024 No Build	2024 Build		2045 No Build	2045 Build	
						GP	Exp		GP	Exp
AM Peak Hour	NB I-15	Cantu-Galleano Ranch Rd to SR-60	1.8	1.9	1.8	1.7	1.7	6.4	2.5	1.7
		SR-60 to I-10	3.0	3.9	4.5	3.1	2.8	8.6	5.1	2.8
		I-10 to SR-210	5.7	5.6	5.7	5.5	5.3	8.2	5.7	5.3
		SR-210 to Duncan Canyon Rd	2.5	1.0	2.4	2.5	2.3	2.7	2.6	2.4
		Cantu-Galleano Ranch Rd to Duncan Canyon Rd	13.0	12.4	14.5	12.7	12.1	25.9	16.1	12.2
	SB I-15	SR-60 to Cantu-Galleano Ranch Rd	2.2	2.7	4.0	2.4	2.0	5.6	3.4	2.0
		I-10 to SR-60	2.9	3.0	4.5	3.0	2.7	9.6	7.0	2.7
		SR-210 to I-10	5.6	6.2	9.4	6.0	5.2	23.3	10.1	5.2
		Duncan Canyon Rd to SR-210	2.5	1.7	2.4	2.3	2.3	7.5	2.5	2.4
		Duncan Canyon Rd to Cantu-Galleano Ranch Rd	13.1	13.7	20.4	13.7	12.2	46.1	23.0	12.3
PM Peak Hour	NB I-15	Cantu-Galleano Ranch Rd to SR-60	1.8	2.5	4.7	1.8	1.7	4.3	1.9	1.7
		SR-60 to I-10	3.0	5.2	4.4	3.0	2.8	5.7	3.4	2.8
		I-10 to SR-210	5.7	6.8	6.4	5.7	5.4	6.8	5.9	5.4
		SR-210 to Duncan Canyon Rd	2.5	1.0	2.7	2.5	2.4	2.8	2.8	2.4
		Cantu-Galleano Ranch Rd to Duncan Canyon Rd	13.0	15.5	18.1	13.0	12.3	19.6	14.0	12.3
	SB I-15	SR-60 to Cantu-Galleano Ranch Rd	2.2	2.4	8.6	2.2	2.1	8.8	5.7	2.0
		I-10 to SR-60	2.9	5.4	9.4	2.8	2.7	12.3	5.4	2.7
		SR-210 to I-10	5.6	5.4	5.4	5.3	5.2	9.8	5.6	5.2
		Duncan Canyon Rd to SR-210	2.5	1.7	2.4	2.4	2.3	2.4	2.4	2.4
		Duncan Canyon Rd to Cantu-Galleano Ranch Rd	13.1	15.0	25.8	12.7	12.2	33.4	19.1	12.3

GP = General Purpose Lanes

Exp = Express Lanes

Source: Prepared for the Project Using Speed Data for I-15 CP Traffic Analysis, 2017.

Surveys from elsewhere in the region regarding the SR-91 express lanes in Orange County indicate users from all income groups use the express lanes, albeit drivers from lower-income households use the express lanes in lower numbers than those in higher income groups, with drivers from households with incomes of \$25,000 or less representing two percent of survey respondents in 2014 and drivers from households with incomes between \$25,000 and \$50,000 representing 6.5 percent of respondents. Although the findings from the Orange County SR-91 express lanes represent a different part of the region and are limited to express lane users specifically and do not compare the likelihood of people in each income range using the express lanes versus the GP lanes, patterns similar to those for the Orange County SR-91 express lanes are expected to emerge with implementation of the proposed project, as some drivers from lower-income households are expected to use the Express Lanes, but not likely to the extent of those from higher-income households.

Although equity concerns are present, the project would provide benefits to low-income drivers, even if they never use the express lanes. The traffic analysis prepared for the project identified overall improvements in traffic flow within the GP lanes in addition to the proposed express lanes. As shown in **Table 2-11** under both the 2024 Build and 2045 Build scenarios, travel time in the GP lanes would be shorter in each direction for both the AM and PM peak hours than the anticipated travel times under the No Build 2024 and No Build 2045 scenarios. In 2024, travel time savings through the project limits relative to the No Build Alternative would be between 1.8 and 13.1 minutes for the GP lanes depending on peak hour and direction. In 2045, travel time savings through the project limits relative to the No Build Alternative would be between 5.6 and 23.1 minutes depending on peak hour and direction.

Modal Equity

Both the study area and region are reliant on single-occupancy vehicles as the primary form of transportation for commuting purposes, with little use of public transportation due to the lack of services offered in the area. As shown in **Table 2-9**, carpooling and transit account for approximately 13.3 percent and 1.7 percent of commute modes in San Bernardino County, respectively. Study area commute modes were nearly identical to those of San Bernardino County overall in terms of carpool and transit use. Currently, there are no carpool or HOV lanes within the project limits. Accordingly, by offering travel time savings for carpools and vanpools meeting the minimum occupancy requirements, the Express Lanes would benefit travelers who carpool or vanpool within the project limits. If those who carpool or vanpool choose not to use the Express Lanes, travel times would still be reduced relative to the No Build Alternative.

Given that there are no public transportation options which offer service using the proposed project, the Express Lanes are unlikely to change mobility for low-income drivers with limited availability of personal vehicles. There is no parallel rail transit service along I-15, and there are limited long-distance transit options that could use the Express Lanes. However, implementation of the Express Lanes may make it possible for OmniTrans or another transit agency to provide express bus service within the I-15 corridor in the future, though no plans are currently under consideration. OmniTrans, VVTA, and RTA were consulted on the I-15 CP and each agency confirmed that they do not currently nor are there plans in the foreseeable future to have transit routes along I-15.

Based on the preceding discussion, equity concerns associated with the project are limited to transponder and toll account costs and access. Given these concerns, SBCTA would create a Low-Income Equity Program, which would include policies to enable low-income households to utilize the proposed project improvements, as identified in COM-1 Possible measures to address equity concerns include:

- Waiving account maintenance fees,
- Allowing the use of cash to replenish accounts, and/or
- Implementing vehicle license plate recognition technologies that would not require the purchase of a transponder.

2.1.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following measure will be implemented to avoid and minimize equity impacts:

COM-1 SBCTA will create a Low-Income Equity Program, which will include policies to enable low-income households to utilize the proposed project improvements, such as waiving account maintenance fees, allowing the use of cash to open and replenish toll accounts, and/or implementing video license plate recognition as an alternative to toll-collection technology.

2.1.6 Relocation and Real Property Acquisition

2.1.6.1 Regulatory Setting

The Department'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 the Department's Title VI Policy Statement.

2.1.6.2 Affected Environment

Information used in this section is based on the October 2017 *Community Impact Assessment*. The I-15 CP is 14.7 miles long. Existing land uses at the I-15 CP northern limits include vacant land, single family residential, some commercial development surrounding Summit Avenue and agricultural land. Continuing south, land uses remain primarily residential until the corridor crosses Etiwanda Avenue, where land uses consist almost entirely of industrial and commercial development from Etiwanda Avenue south to the southern terminus of the project, just south of SR-60. (See Section 2.1.1.1 above for additional information on existing and future land use within the project limits.)

The I-15 freeway is built on embankment at mostly level terrain throughout the project. The NB and SB roadbeds are typically at the same elevations and separated by a median barrier. The existing

right of way width along the I-15 freeway within the project limits from I-15 centerline to Caltrans right of way line on the west and east sides of the freeway is approximately between 120 feet and 200 feet.

2.1.6.3 Environmental Consequences

No Build Alternative

Under the No Build Alternative, no property acquisition and no relocation of residences or business would be required.

Build Alternative

Temporary

Construction of the proposed improvements would occur mostly within the existing state right of way limits; however, three TCEs will be required at the following locations:

- Arrow Route for the relocation of overhead electrical lines. TCE is within the parcel Assessor Parcel Number (APN) 0229-121-15 owned by CRPT Land Holding. (See **Figure 1-6**, Sheet 11 of 22)
- The area of Rochester OH for construction staging. TCE is within the parcel APN 0229-121-01 owned by SBCTA. (See **Figure 1-6**, Sheet 10 of 22)
- East Mission Boulevard to realign UPRR Mission Boulevard OH and side track relocation. Due to insufficient horizontal clearance between the side track and the proposed crash wall, relocation of the side track would be required. TCE would be required from the two parcels owned by UPRR, APN 156-020-050 and 156-020-051. (See **Figure 1-6**, Sheet 4 of 22)

The construction activities within the identified TCE areas would be temporary, and would result in minimal impacts to surrounding businesses or communities.

Permanent

Based on the preliminary engineering, there is an overhead 66kV transmission line with three conductors that runs parallel along the east of the NB I-15, which is connected by two steel poles. The steel pole to the north encroaches into the proposed widening of the bridge section at Arrow Route Undercrossing, therefore needs to be relocated. (See **Figure 1-6**, Sheet 11 of 22) The proposed project would replace the southerly steel pole in place, and replace and relocate the northerly pole within the existing easement and along the same line, but approximately 62 feet east from the existing location (175 feet from the I-15 alignment) to accommodate the widened structure. These proposed changes would push the 66kV overhead line to cross outside of the state right of way. Permanent Easement will be required from a portion of an adjacent private property for the location of the overhead line. The private property is part of the parcel APN 0229-121-15 owned by CRPT Land Holding. The portion affected by right of way is used as a salvaged cars yard by a business located at 12167 Arrow Route in Rancho Cucamonga. The required additional right of way would potentially result in a sliver acquisition of approximately 0.12 acres, which is approximately 0.32 percent of the total 34.33-acre property. All right of way acquisition as related to the CRPT Land Holding property will be performed in accordance with

the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as Amended. It is anticipated that the permanent right of way impact on the affected property will have minimal permanent impact on the business.

All other utility relocation that may be required for the project will be constructed within the existing right of way limits.

All right of way related activities will be performed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as Amended. The project would not result in any permanent impacts on surrounding development as a result of the anticipated needed permanent easements. The project would not result in the displacement and relocation of residences or businesses.

2.1.6.4 Avoidance, Minimization, and/or Mitigation Measures

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

2.1.7 Environmental Justice

2.1.7.1 Regulatory Setting

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

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. The Department'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.

2.1.7.2 Affected Environment

Information used in this section is based on the October 2017 *Community Impact Assessment* prepared for this project. Analysis of environmental justice impacts is a two-step process; the first is determining the presence of protected populations (minority or low-income populations), and the second is determining if the project has a disproportionate adverse impact to minority and/or low-income populations. Census Block Groups used in the Community Impacts Section 2.1.5 were also used to identify the presence of protected populations in the study area. To identify concentration of protected population in the community study areas, the present of environmental justice population within the block group population was compared to other block groups within communities, and the city and county in which the block group is located.

Minority Population

Minority populations include American Indian, Asian or Pacific Islander, black, and Hispanic population groups. **Table 2-12** provides the percentage and count of racial and ethnic demographics within the counties, cities, and census block groups included in the community study area. **Figure 2-13** shows the general percentage and distribution of the minority population within the community study areas relative to project improvement limits.

There is high percentage of Hispanic populations in the county, city, and community study areas. The percentage of Hispanic populations in the census block groups is the highest among all minority groups, and it ranges from approximately 27.00 to 83.00 percent of the associated total populations. The highest percentage of Hispanic population is found within communities closest to Foothill Boulevard in the City of Fontana.

Hispanic population in the cities within the project area ranges from approximately 38.00 to 77.00 percent of the associated total populations. The minority population represents more than one-half of the population in San Bernardino and Riverside counties.

According to **Table 2-12**, the City of Eastvale community study area has a higher concentration of Hispanic population and overall minority population in comparison to the city racial and ethnic demographics. Census Block Group 406.07-1 has almost double the percentage of Hispanic population than that of the City of Eastvale. The percentage of Hispanic population in the study area block groups is also considerably higher than the respective population in the County of Riverside.

Percentage of Hispanic population, and minority population in general, is lower in the block groups representing the community study area than in the City of Jurupa Valley, except for Census Block Group 406.04-1, which has a comparable percentage of Hispanic population to the city. In general, percentage of Hispanic population in the community study area and the City of Jurupa Valley is higher than that of the County of Riverside.

Hispanics represent approximately 70 percent of the City of Ontario population. However, most block groups within the communities in the study area have a lower percentage of Hispanics, with rates that range between 32.17 and 57.29. The Hispanic population still represents almost half of the total population in most of the census block groups in the communities in the study area. The percentage of Hispanic population in the block groups of the community study area is comparable to the County of San Bernardino.

Ethnic and racial composition in the City of Rancho Cucamonga communities study area show lower rates of Hispanic and other minority populations in comparison to racial composition of the city population. The Hispanic population in the study area block groups ranges approximately between 19-49 percent of the total population, with mostly the block groups in the southern section of the community study area at the higher end of the range. The block groups with higher percentages of Hispanic population are considered comparable to the ethnic composition of the County of San Bernardino relative to its Hispanic population.

Table 2-12. Race and Ethnic Composition

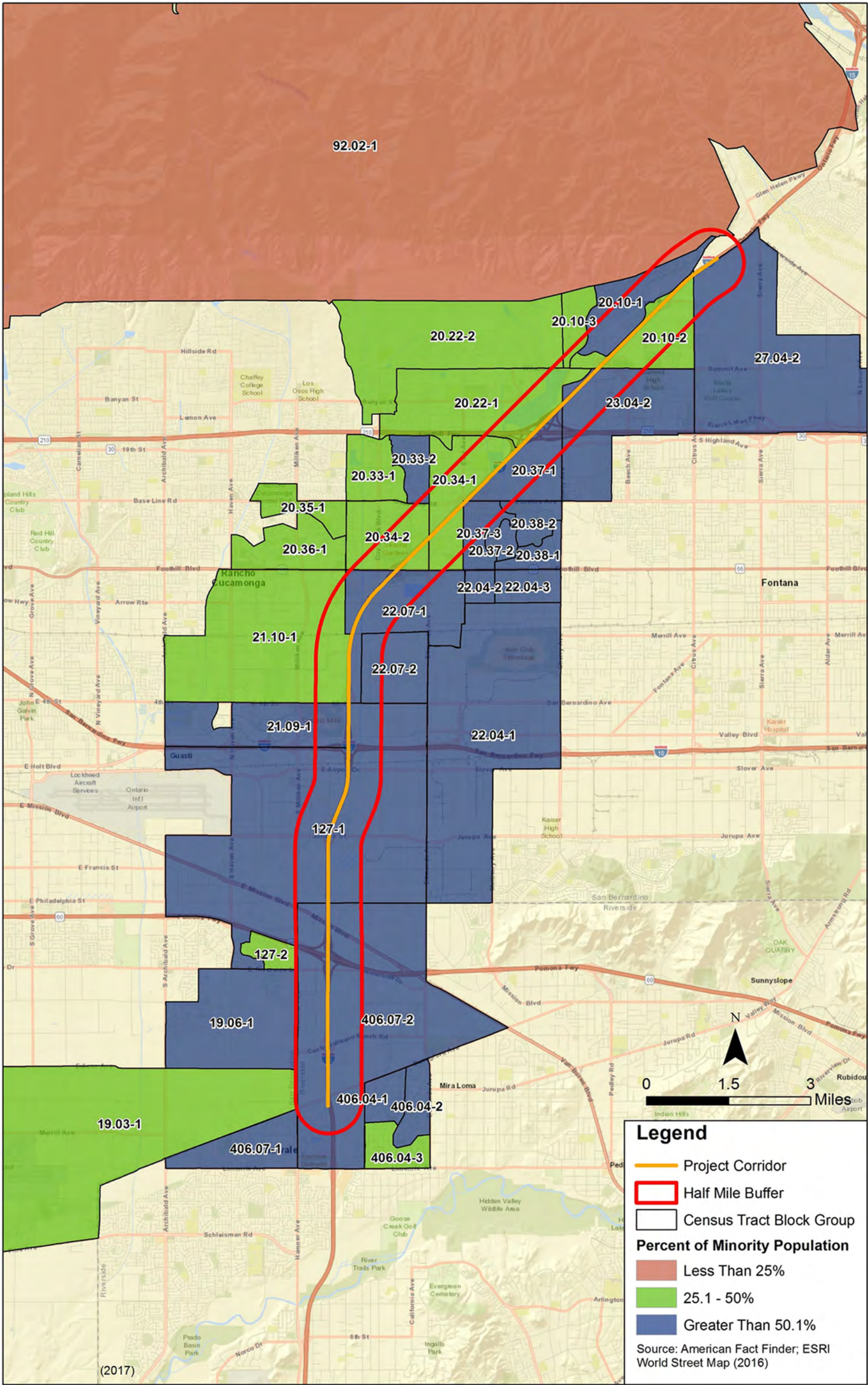
Geography	Total	White		Black		American Indian/ Native Alaskan		Asian		Native Hawaiian/ Pacific Islander		Other Race Alone		Two or More Races		Hispanic or Latino		
		Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
County																		
Riverside (Riv)	2,266,899	868,743	38.32	133,798	5.90	10,236	0.45	134,734	5.94	6,160	0.27	3,811	0.17	54,390	2.40	1,055,027	46.54	
San Bernardino (SBd)	2,078,586	660,447	31.77	170,307	8.19	7,479	0.36	133,270	6.41	6,465	0.31	4,801	0.23	45,644	2.20	1,050,173	50.52	
City																		
Eastvale (Riv)	55,298	12,063	21.81	5,130	9.28	252	0.46	14,892	26.93	23	0.04	31	0.06	1,351	2.44	21,556	38.98	
Jurupa Valley (Riv)	97,247	23,102	23.76	2,863	2.94	281	0.29	2,765	2.84	249	0.26	21	0.02	1,126	1.16	66,840	68.73	
Ontario (SBd)	166,892	28,646	17.16	9,313	5.58	261	0.16	8,177	4.90	287	0.17	262	0.16	2,795	1.67	117,151	70.20	
Rancho Cucamonga (SBd)	170,170	67,697	23.76	14,384	2.94	227	0.29	20,382	2.84	248	0.26	227	0.02	5,510	1.16	61,495	68.73	
Fontana (SBd)	201,355	31,188	15.49	18,560	9.22	317	0.16	11,773	5.85	839	0.42	349	0.17	4,118	2.05	134,211	66.65	
Census Block Group Study Area in Cities within the Project Area																		
Eastvale	406.07-1	4845	905	18.68	173	3.57	53	1.09	771	15.91	0	0	0	0	43	0.89	2,953	60.95
Eastvale / Jurupa Valley	406.07-2	3,720	1,254	33.71	501	13.47	0	0	357	9.6	0	0	0	0	0	0	1,608	43.23
Jurupa Valley	406.04-1	1742	593	34.04	0	0	0	0	11	0.01	0	0	0	0	0	0	1,138	65.33
	406.04-2	2100	745	35.48	0	0	0	0	0	0	24	1.14	0	0	93	4.43	1,238	59
	406.04-3	1817	848	46.67	0	0	0	0	68	3.74	0	0	0	0	12	0.01	889	48.93
Ontario	19.03-1	6,820	2,124	31.14	184	2.7	0	0	2240	32.84	0	0	0	0	78	1.14	2,194	32.17
	19.06-1	4,058	987	24.32	130	3.2	0	0	547	13.48	0	0	26	0.64	43	1.06	2,325	57.29
	21.09-1	3,972	761	19.16	829	20.87	15	0.38	327	8.23	0	0	33	0.83	226	5.69	1,781	44.84
	127-1	1,973	676	34.26	125	6.34	0	0	66	3.35	0	0	0	0	63	3.19	1043	52.86
	127-2	2,271	2,258	99.42	87	3.83	0	0	373	16.42	0	0	177	7.79	13	0.57	987	43.46

Table 2-12. Race and Ethnic Composition (continued)

Geography		Total	White		Black		American Indian/ Native Alaskan		Asian		Native Hawaiian/ Pacific Islander		Other Race Alone		Two or More Races		Hispanic or Latino	
			Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Rancho Cucamonga	20.22-1	4,277	1,754	41.01	234	5.47	0	0	681	15.92	0	0	0	0	51	1.19	1557	36.4
	20.22-2	8,365	4,106	49.9	829	9.91	181	2.16	1,793	21.43	0	0	803	9.5	653	7.8	2544	30.41
	20.33-1	5,026	3,470	69.04	97	1.93	10	0.2	708	14.09	0	0	232	4.61	509	10.13	1790	35.61
	20.33-2	3,057	1,174	38.4	261	8.54	0	0	85	2.78	0	0	0	0	134	4.38	1403	45.89
	20.34-1	7,332	1,881	25.65	1,051	14.33	0	0	1,661	22.65	0	0	50	0.68	40	0.55	2,649	36.13
	20.34-2	7,623	3,094	40.59	404	5.3	0	0	1,913	25.1	0	0	20	0.26	121	1.59	2,071	27.17
	20.35-1	4,568	2,261	49.5	840	18.39	0	0	702	15.37	22	0.48	199	4.36	544	11.9	850	18.61
	20.36-1	9,577	5,835	60.93	1,283	13.4	190	2	1,693	17.68	0	0	145	1.51	431	4.5	2507	26.18
	21.10-1	7,246	1,641	22.65	509	7.02	53	0.73	1,864	25.72	0	0	0	0	393	5.42	2,786	38.45
	22.07-1	1,980	588	29.7	382	19.29	0	0	195	9.85	0	0	0	0	3	0.15	812	41.01
	22.07-2	2,809	752	26.77	662	23.57	0	0	7	0.25	0	0	7	0.25	7	0.25	1,374	48.91
Fontana	20.10-1	4,774	1,465	30.69	1,021	21.39	0	0	282	5.91	23	0.48	0	0	376	7.88	1,607	33.66
	20.10-2	2,334	675	28.92	140	6	0	0	564	24.16	0	0	0	0	69	2.96	886	37.96
	20.10-3	3,238	1,213	37.46	244	7.54	0	0	261	8.06	22	0.68	0	0	149	4.6	1349	41.66
	20.37-1	920	45	4.89	122	13.26	0	0	264	28.7	0	0	0	0	8	0.87	481	52.28
	20.37-2	2,265	955	42.16	247	10.91	65	2.87	189	8.34	0	0	117	5.17	271	12	1148	50.68
	20.37-3	4,883	1,569	32.13	777	15.91	126	2.58	479	9.81	38	0.78	0	0	84	1.72	1,810	37.07
	20.38-1	3,126	625	20	326	10.43	0	0	519	16.6	0	0	0	0	97	3.1	1559	49.87
	20.38-2	2,734	556	20.34	1,033	37.78	0	0	313	11.45	0	0	0	0	26	0.95	806	29.48
	22.04-1*	981	241	24.57	132	13.46	0	0	0	0	0	0	0	0	0	0	719	73.29
	22.04-2*	1,678	408	24.31	188	11.2	0	0	94	5.6	0	0	0	0	17	1.01	1266	75.45
	22.04-3*	3,914	662	16.91	64	1.64	0	0	159	4.06	0	0	0	0	66	1.69	3252	83.09
	23.04-2	10,428	2,557	24.52	1,753	16.81	93	0.89	882	8.46	0	0	89	0.85	332	3.18	4722	45.28
	27.04-2	7,993	1,687	21.11	947	11.85	0	0	1,417	17.73	0	0	0	0	377	4.72	3,565	44.6
	92.02-1	1,428	1,091	76.4	34	2.38	0	0	91	6.37	0	0	0	0	0	0	212	14.85

Note: * Located within the boundaries of the City of Fontana and San Bernardino County Unincorporated Area
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, compiled in 2016.

Figure 2-13. Minority Population Distribution



Source: I-15 CP Community Impact Assessment, October 2017.

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The communities in the study area of the City of Fontana represent a mixture of ethnic groups, with Hispanic or Latino populations being the largest ethnic group within most of the census block groups. The Black population represents the largest minority ethnic group within Census Block Group 20.38-2 of the study area. Overall, the percentage of Hispanic population in the block groups represented in the community study area is comparable to or higher than San Bernardino County, but lower than the City of Fontana, where the minority population is 76.45 and the Hispanic population is 66 percent of the city's population.

Low-Income Population

The poverty level according to the Department of Health and Human Services for the Federal Fiscal Year 2017 guidelines is \$24,300 for a family of four (U.S. Department of Health and Human Services 2016). The median household income for all community study area block groups shown in **Table 2-13** is above the Department of Health and Human Services threshold. The U.S. Census Bureau 2014 weighted average poverty threshold for individuals was used for the purpose of identifying low-income population within the study areas. According to the Census estimates, poverty threshold for individuals is the income of \$12,071. **Table 2-13** provides the percentage of individuals below the poverty levels within the counties and cities represented in the project area as well as the community study area. According to the table, individuals within the poverty levels are approximately 16 percent of population in Riverside County and 19 percent of the population in San Bernardino County. The table also shows that individuals within the poverty levels range from approximately five to 18.30 percent of the overall population in the cities, with the City of Rancho Cucamonga and Eastvale at the lower end of the range.

Table 2-13. Poverty Level

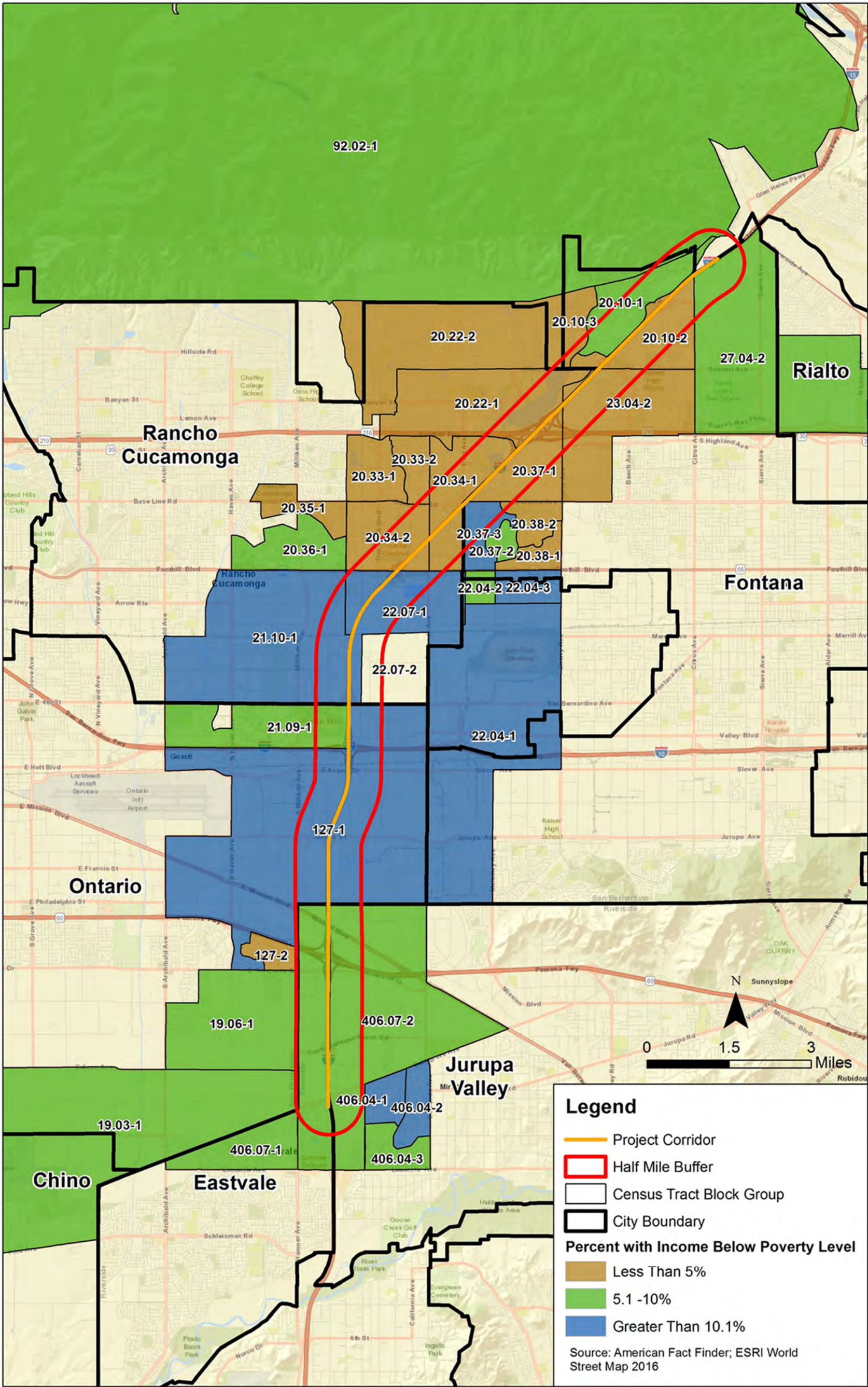
Geography	Individuals with Income Below Poverty Level (%)	Median Household Income (\$)
County		
Riverside (Riv)	16.9	56,592
San Bernardino (SBd)	19.2	54,100
City		
Eastvale (Riv)	5.1	109,783
Jurupa Valley (Riv)	16.9	55,898
Ontario (SBd)	18.3	54,156
Rancho Cucamonga (SBd)	7.8	77,061
Fontana (SBd)	16.0	64,995

Table 2-13. Poverty Level (continued)

Geography		Individuals with Income Below Poverty Level (%)	Median Household Income (\$)
Census Block Group Communities Study Area in Cities within the Project Area			
Eastvale / Jurupa Valley	406.07-2	9.73	63,468
Jurupa Valley	406.04-1	12.31	104,650
	406.04-2	16.35	87,812
	406.04-3	7.49	80,347
	406.07-1	5.21	117,750
Ontario	19.03-1	6.58	89,750
	19.06-1	5.3	107,734
	21.09-1	7.88	57,284
	127-1	29.95	61,875
	127-2	3.83	90,551
Rancho Cucamonga	20.22-1	1.43	120,333
	20.22-2	1.53	140,063
	20.33-1	4.87	78,598
	20.33-2	2.19	93,854
	20.34-1	1.87	102,686
	20.34-2	1.1	73,893
	20.35-1	4.57	95,438
	20.36-1	8.28	65,484
	21.10-1	16.57	54,715
	22.07-1	23.16	60,625
	22.07-2**	-	-
Fontana	20.10-1	5.74	102,650
	20.10-2	3.34	116,146
	20.10-3	1.46	124,861
	20.37-1	1.96	105,625
	20.37-2	5.62	82,143
	20.37-3	10.79	92,917
	20.38-1	0	96,033
	20.38-2	4.46	84,716
	22.04-1*	41.04	31,250
	22.04-2*	6.57	55,000
	22.04-3*	16.81	58,377
	23.04-2	3.16	93,379
	27.04-2	8.09	108,405
	92.02-1	9.66	52,841
* Located within the boundaries of the City of Fontana and San Bernardino County Unincorporated Area			
** Indicates that either no sample observations or too few sample observations were available			
Source: U.S. Census Bureau, 2014 American Community Survey, 5-year estimates, compiled in 2016.			

Higher levels of individuals below poverty levels are found in Census Block Group 22.07-1 in the city of Rancho Cucamonga, Census Block Group 22.04-1 in the City of Fontana, and Census Block Group 127-1 in the City of Ontario. **Figure 2-14** shows that the highest concentration of individuals below the poverty level in the communities in the study area is in the middle section of the project area, between SR-60 and Foothill Boulevard.

Figure 2-14. Poverty Level



Source: I-15 CP Community Impact Assessment, October 2017.

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The City of Eastvale community study area has approximately 5 percent of its population with an income below poverty level, which is comparable to the level of poverty in the overall city population, but considerably lower compared to the level of income in the County of Riverside.

The City of Jurupa Valley community study area block groups have comparable percentages of individuals with income lower than the poverty level to the City of Jurupa Valley and the County of Riverside, except for Census Block Group 406.4-3. This block group has approximately half the percentage of individuals below poverty level in comparison to the city and the county.

The City of Ontario community study area block groups have a considerably lower percentage of individuals below poverty level in comparison to the City of Ontario and the County of San Bernardino except for Census Block Group 127.1. This block group has approximately double the percentage of individuals below poverty level of that of the city and county.

The City of Rancho Cucamonga community study area block groups have a considerably lower percentage of individuals below poverty level in comparison to the City of Rancho Cucamonga and San Bernardino County population. However, Census Block Groups 21.10-1 and 22.07-1 have a considerably higher percentage of individuals with income below poverty levels than the city and county. Both block groups are located within the southern limits of the city and south of Foothill Boulevard.

In the City of Fontana community study area, Census Block Group 20.38-1 is shown to have 0 percent of its population below the poverty level, while the percentage of individuals the below poverty level in most census block groups in the communities in the study area ranges between 1 and 10 percent, which is lower than the poverty level in the City of Fontana and the County of San Bernardino. However, two of the block groups located south of Foothill Boulevard and within the southern limits of the study area have comparable to or a higher percentage of individuals with income below poverty level than the city and the county.

2.1.7.3 Environmental Consequences

No Build Alternative

Under the No Build Alternative, the improvements proposed by the project would not be constructed. No specific adverse impacts would affect low-income or minority populations that would not also occur for the general population under this alternative.

Build Alternative

Large percentages of minority population are present within the project limits; however, greater concentrations of minority and low-income population can be found in the section of the project area located between south of Foothill Boulevard and SR-60, within the limits of the City of Fontana. Environmental justice impacts are considered disproportional if project's adverse impacts are more severe or greater in magnitude in minority and/or low-income groups.

Temporary

The proposed project would have temporary impacts associated with issues such as noise, water quality, air quality, and traffic and circulation during construction. Impacts during project construction on the adjacent communities regarding access and circulation would be avoided

or/and minimized to the greatest extent practicable with implementation of the TMP measures listed in Section 2.1.5 of this document. The potential for noise, water quality, and air quality impacts during construction would also be avoided and minimized with the implementation of measures listed in the Section 2.2.7, Noise, and Section 2.2.2, Water Quality. The project would not have temporary construction impacts on the general population; therefore, there would be no impacts during construction activities on the environmental justice population.

Permanent

It is expected that the project would be constructed mostly within the existing right of way limits. It does not require property acquisition that would result in displacement of any residence or businesses, nor would it cause relocation impacts. The project would not support a large development project at the expense of minority and low-income communities. As indicated in the evaluation of community impacts in Section 2.1.5 of this document, it is also anticipated that the project would not have adverse impacts on community character and cohesion, result in separation of communities, a change local circulation and access to public services and facilities including community services, emergency services, and transit facilities. The project would not result in changes that would directly or indirectly affect the economic conditions and employment in the project area. Business access and visibility would be maintained during construction of the proposed project.

The project operation would not have adverse air quality or water quality impacts on the general population; therefore, it is not expected that the project would have disproportionate impacts on the minority and low-income population. The project has the potential to have noise impacts on sensitive receptors due to traffic; however, the project would construct noise attenuation measures in form of soundwalls. The locations of the walls are identified in Section 2.2.7 of this document. With the implementation of noise attenuation measures, the project would not be considered to have noise impacts on the general population; therefore, would not have disproportional noise impacts on the minority and low-income population. Similarly, the project would implement measures to avoid and minimize potential project impacts on aesthetics and visual resources as described in Section 2.1.9 (Visual/Aesthetics); therefore, low-income and minority population would not be impacted.

Equity Assessment

The purpose of the project is to relieve congestion and provide a reliable travel option to commuters. Express Lanes provide an option for drivers who can pay to use the Express Lanes to be assured they can reach their destination in a specified amount of time. According to the discussion in Section 2.1.8, Traffic and Transportation, the proposed project would result in improved traffic flow and savings in travel time for the GP lanes in addition to the proposed Express Lanes. The traffic analysis identified overall improvements in traffic flow within the GP lanes in addition to the proposed Express Lanes. Under the 2024 build and 2045 build scenarios, travel time in the GP lanes would be shorter in each direction for both the AM and PM peak hours than travel times under the build scenarios. In 2024, travel time savings through the project limits relative to the No Build Alternative would be between 1.8 and 13.1 minutes for the GP lanes depending on peak hour and direction. In 2045, travel time savings through the project limits relative to the No Build Alternative would be between 5.6 and 23.1 minutes depending on

peak hour and direction. Therefore, it is anticipated that the project would provide benefits to low-income drivers, even if they never use the Express Lanes.

However, there is a potential that low-income drivers who use the Express Lanes may experience some cost burdens associated with the proposed project as discussed in the Community Impacts analysis in Section 2.1.5.3. SBCTA will create a Low-Income Equity Program which will include policies that enable low-income drivers to utilize the proposed project improvements. Policies may include waiving account maintenance fees, allow the use of cash to open and replenished toll accounts, and implement video license plates as an alternative for toll-collection technology.

2.1.7.4 Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis, the Build and No 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.

2.1.8 Utilities/Emergency Services

2.1.8.1 Affected Environment

Utilities

Unless otherwise noted, the information used in this section is based on the October 2017 *Community Impact Assessment* prepared for the project, and approved in July 2017. This information is obtained from the Right-of-Way Data Sheets, including Utilities Information Sheet, prepared for the project approval document. There are approximately 400 utilities located within the project limits. The utilities include overhead and underground electrical, natural gas lines, heating oil pipelines, telephone and communication, cable television, water pipes, and sewer pipes. Other providers exist within the project area but cover a regional service area. Primary utility providers for the incorporated local jurisdictions within the project area are listed in **Table 2-14**. Other providers exist within the project area, but cover a regional service area. Some of these providers include Plains All American Pipeline for fuel oil, Central Basin Municipal Water District for reclaimed water, Metropolitan Water District of Southern California, San Gabriel Valley Municipal Water District, and Santa Ana Watershed Project Authority Brine Line.

Emergency Services

There are four fire stations within approximately two miles of the project corridor that represent several jurisdictions, including the County of San Bernardino, City of Rancho Cucamonga, City of Eastvale, and City of Jurupa Valley. These stations provide a variety of emergency services, including fire, medical, and hazardous material. San Bernardino County Fire Station 79, in the northern area of the City of Fontana, provides paramedic and fire services to northern Fontana residents and business owners, and responds to incidents within the urban/wildland borders, including Lytle Creek and the I-15 corridor. The CHP is responsible for patrolling the freeways and unincorporated roadways and highways. The CHP and Caltrans take the lead in handling transportation emergency incidents resulting from hazardous material. In addition, local

jurisdictions typically have several private ambulance companies that provide emergency transportation services.

Table 2-14. Local Utility Providers

Jurisdiction	Trash Collection	Water	Sewer/ Treatment	Gas	Electricity	Telephone Conduits/ Fiber Optics
Eastvale	Burrtec Disposal	Jurupa Community Service District	Jurupa Community Service District	SCG	SCE	Frontier Communications, ATT, Spectrum
Jurupa Valley	Burrtec Disposal	Jurupa Community Service District	Jurupa Community Service District	SCG	SCE	Frontier Communications, ATT, Spectrum, Charter
Ontario	Municipal Utilities Company	Municipal Utilities Company	City/IEUA	SCG	SCE	Frontier Communications, ATT, Spectrum
Rancho Cucamonga	Burrtec Disposal	Cucamonga Valley Water District	City/IEUA	SCG	SCE/RC Municipal Utility	Frontier Communications, ATT, Spectrum, Charter, Sprint, Sunesys, GTE
Fontana	Burrtec Disposal	West Valley Water District	City/IEUA	SCG	SCE	Frontier Communications, ATT, Spectrum
SCE = Southern California Edison, SCG = Southern California Gas, IEUA = Inland Empire Utilities Agency Source: I-15 CP Community Impact Assessment, October 2017.						

2.1.8.2 Environmental Consequences

No Build Alternative

Under the No Build Alternative, it is not anticipated that there would be changes to utilities infrastructure other than typical maintenance and upgrade work. Under the No Build Alternative, there would be no impacts on utilities. Access to emergency services would not be affected under the No Build Alternative. However, the No Build Alternative would not improve travel reliability and speed, factors that could benefit some public services, such as emergency services.

Build Alternative

Temporary

Utilities

Several utilities would require relocation due to conflict with the project improvements or due to proximity and requirements for clearance distance. **Table 2-15** presents a list of the type and location of the utilities that could be affected by the project. These utility relocations are expected to be within existing state right of way limits with the exception of the replacement of overhead lines south of the Arrow Route east of the I-15. The proposed project would replace the southerly steel pole in place and would replace and relocate the northerly pole along the same line 62 feet east from the existing location (175 feet from the I-15 alignment) in order to accommodate the widened structure. These proposed changes would push the 66kV overhead

line to cross outside the state right of way. To relocate the overhead lines, a Permanent Easement (PE) and TCE are anticipated to be required from the adjacent vacant parcel owned by CRPT Land Holding. If during final design other utilities are found to be affected, a re-evaluation of the

Table 2-15. Potential Affected Utilities

Owner	Utility		Impact	Location
	Type	Description		
SCE	768-inch electrical overhead (OH) and steel poles	On I-15 and Arrow Route	Relocation	Location of the poles within existing right of way. Overhead lines will be outside of the existing right of way and within a proposed permanent utility easement.
CVWD	8-inch water line	Rochester overhead/Metrolink railroad	Protect in place (encase)	Within existing right of way
CVWD	15-inch sewer pipe	Day Creek Channel	Protect in place (encase)	Within existing right of way
IEUA	36-inch mortar-lined steel pipe	East Avenue	Protect in place (encase)	Within existing right of way
Source: I-15 CP Community Impact Assessment, October 2017.				

environmental document would be performed to identify any potential impacts and required measures. All utility relocations would be planned and implemented in coordination with and with the approval of utility providers. It is not anticipated that the project would affect utility and communication services as a result of the potential utility relocations. The project team met with SCE in January and February of 2016 to discuss the project overview, with the focus on potential conflicts at Arrow Route. Ongoing coordination would be necessary in advance of the Design-Build phase. Furthermore, SBCTA and Caltrans coordination with the utility providers is anticipated to implement relocation of utilities in a manner that would not have permanent or temporary impacts on users.

Emergency Services

Temporary and short-term traffic closures and detours during construction could result in impacts on circulation and access for emergency services. The project would implement a TMP to avoid and minimize such impacts. All closures and detours would be coordinated with local jurisdictions and providers of these services to avoid and minimize impacts on emergency services to the community. The project would improve traffic conditions in the general travel lanes and overall mobility in the project area. Police, fire protection, and other emergency services would benefit by being able to use the express lanes at no cost, as needed.

Permanent

The Build Alternative would not result in any permanent, direct or indirect, impacts on utilities or emergency services.

Relocation of utilities will be planned and implemented in coordination with utility providers. SBCTA and Caltrans will implement strategies and measures identified in the TMP prepared for

the project to minimize construction impacts on emergency services. These TMP measures and strategies are listed in **Section 2.1.5.3** of this document. If, during the Design-Build phase of the project, utilities are found to be affected, a re-evaluation will be performed to determine any potential impacts, and, contingent upon the results, measures will be implemented to avoid or minimize impacts.

2.1.8.3 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.1.9.1 Regulatory Setting

The Department, 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 Part 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

2.1.9.2 Affected Environment

Unless otherwise noted, the information from this section was produced from the March 2017 *Traffic Study Report*.

Study Area and Analysis Scenarios

The study corridor encompasses a total of eleven interchanges, including three major system (freeway-to-freeway) interchanges on I-15 (at SR-60, I-10, and SR-210), and seven existing local street interchanges (at Cantu-Galleano Ranch Road, Jurupa Street, East Fourth Street, East Foothill Boulevard, Baseline Road, and Beech Avenue/Summit Avenue, Duncan Canyon Road) and one future local street interchange (at Arrow Route), which will be constructed by another project. The entire I-15 Project study corridor falls within the jurisdiction of Caltrans District 8. SBCTA is the regional transportation planning agency for the part of the study corridor extending north from the San Bernardino/Riverside County line. The southernmost portion of the study corridor that falls within Riverside County is under the jurisdiction of Western Riverside Council of Governments (WRCOG) regional planning agency. (See **Figure 2-15** for the Study Area Limits)

Figure 2-15. Limits of the Study Area



Source: I-15 CP Traffic Study Report, March 2017.

The freeway LOS was determined using the density analysis methodology in the HCM. The capacities are based on information contained in the HCM and the Caltrans Ramp Meter Design Manual. Freeway terrains were determined by comparing the grades found in Google Earth Pro to the HCM definitions for level, rolling, and mountainous terrain. Three types of freeway facilities were analyzed, as follows:

- Freeway mainline levels of service determined from segment density.
- Freeway weaving defined as the crossing of two streams of traffic traveling in the same direction along a significant length of highway without the aid of traffic control devices.
- The ramp merge and diverge analysis performed on an influence area of 1,500 feet, including the acceleration or deceleration lane and adjacent freeway lanes.

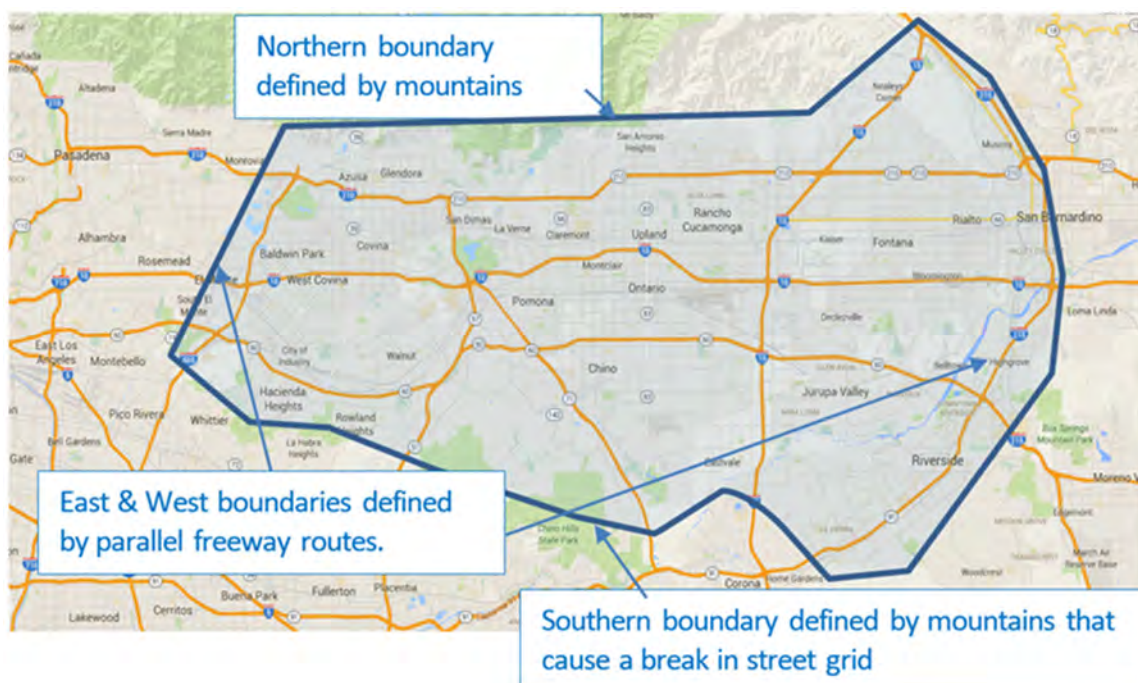
In addition, queue storage capacity analysis was performed for the I-15 ramp terminal intersections to identify locations where excessive queuing might occur. For future conditions, intersection modification needed to maintain adequate storage capacity were considered as part of the Build Alternative proposed improvements. For on-ramp locations where modifications to existing ramps are proposed as part of the project, queuing was evaluated at ramp meters to determine if the ramp provides sufficient vehicle queue storage to avoid vehicles queuing across upstream arterial intersections and disrupting arterial roadway operations.

For intersections, the HCM LOS thresholds were used to evaluate LOS for signalized and unsignalized intersections within the project limits. LOS for signalized intersections is based on the average delays for all vehicles entering the intersection. For unsignalized intersection the LOS is based on the delay for the worst performing approach. The study evaluated intersections at the surface streets end of the I-15 ramps and at nearby intersections that may be affected by the project.

The HCM does not currently have a specific procedure for analyzing express lanes access points. Express lane access points were therefore evaluated as either basic segment, weaving segment, or ramp merge/diverge facilities. In most cases, access points function like weaving freeway segments with the express lanes functioning as left-side auxiliary lanes. If the maximum weaving length exceeds the actual weaving length, the segment is evaluated as a basic segment, since there is no merging or diverging.

The effect of the project on vehicle-hours of delay (VHD) was analyzed over a sub-region that represents the likely extent of redistribution effects of the project (See **Figure 2-16**). Average vehicle speed is a useful indicator of overall traffic operations in the corridor.

- Traffic operations analyses were conducted for the following five scenarios:
- Existing (2014) Conditions
- Opening Year 2024 No Build Conditions
- Opening Year 2024 Build Alternative Conditions
- Design Year 2045 No Build Conditions
- Design Year 2045 Build Alternative Conditions

Figure 2-16. Sub-Region for VHD Analysis

Source: I-15 CP Traffic Study Report, March 2017.

Existing (2014) Traffic Conditions

Mainline Volumes and Level of Service

Mainline Video counts were performed on Southbound I-15 at the north end of the study corridor and Northbound I-15 at the south end of the study area. At these locations, 24-hour video counts were collected for 3 days (a typical weekday, Friday, and Sunday) in the first week of December 2014. Caltrans Performance Measurement System (PeMS) Data, a large Caltrans-maintained database of most current traffic volumes, speeds and related information that gets updated periodically in real time, was compared to the video counts and found to be very consistent. PeMS data for other sections of I-15 within the study corridor were also utilized in the analysis. This collected data shows the following:

- I-15 at the south end of the study area (Cantu-Galleano Ranch Road) is shown to have AM and PM peaks in both directions of travel. The AM peak is sharper and roughly similar in hourly volume to the PM peak. This pattern is typical of corridors with job sites and housing located at both ends of the corridor.
- In contrast, I-15 at the north end of the corridor (Summit Avenue) has a SB peak in the AM and a NB peak in the PM. This pattern is typical of places with job sites at one end of the corridor and housing at the other end.
- On the days traffic data was collected, Friday traffic did not differ substantially from Thursday traffic.
- On Sundays, the SB peak at the north end of the corridor occurs in the PM rather than the AM.

The Existing (2014) freeway volumes are shown with the LOS in **Table 2-16**. The table shows that LOS is within acceptable level of service of D or better in most locations. Bottleneck conditions occur in each direction of travel, which degrades traffic operations. Weaving sections may have a worse LOS than basic freeway sections with comparable (or lower) traffic volumes due to the disruptive effects of weaving. Comparison of traffic volumes on weekdays, Friday, and Sunday conditions shows the following patterns:

Table 2-16. Existing (2014) I-15 Freeway Volumes and LOS

Freeway Segment	Analysis Type	# of Lanes	AM Peak Hour			PM Peak Hour		
			Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound								
Cantu-Galleano Ranch Rd to SR-60	Weaving	4+Aux	4,964	21.6	C	6,135	26.0	C
SR-60 to Jurupa St	Basic	4	5,853	25.0	C	6,135	26.0	C
Jurupa St to I-10	Weaving	4+Aux	5,932	>Capacity	F	6,939	>Capacity	F
I-10 to Fourth St	Weaving	5+Aux	4,972	19.2	B	6,646	23.9	C
Fourth St to Foothill Blvd	Basic	4	4,208	18.1	C	6,803	29.3	D
Foothill Blvd to Baseline Rd	Basic	4	3,483	15.1	B	6,410	27.1	D
Baseline Rd to SR-210	Weaving	4+Aux	3,472	14.5	B	5,975	>Capacity	F
SR-210 to Summit Ave	Weaving	4+Aux	2,575	10.6	B	4,328	18.9	B
Summit Ave to Duncan Canyon Rd	Basic	4	2,428	10.7	A	3,826	16.0	B
I-15 Southbound								
Duncan Canyon Rd to Summit Ave	Basic	4	4,212	17.7	B	2,923	12.6	B
Summit Ave to SR-210	Weaving	4+Aux	5,279	>Capacity	F	3,211	13.4	B
SR-210 to Baseline Rd	Basic	5	7,196	24.1	C	4,090	13.8	B
Baseline Rd to Foothill Blvd	Basic	4	7,467	34.0	D	4,159	17.6	B
Foothill Blvd to Fourth St	Basic	4	8,417	41.8	E	5,022	21.0	C
Fourth St to I-10	Weaving	5+Aux	7,788	29.2	D	5,524	21.0	C
I-10 to Jurupa St	Weaving	4+Aux	8,113	>Capacity	F	6,026	>Capacity	F
Jurupa St to SR-60	Weaving	3+Aux	7,052	>Capacity	F	6,256	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	Basic	4	5,406	22.8	C	5,315	21.8	C
Source: I-15 CP Traffic Study Report, March 2017.								

Mainline Vehicle Mix

I-15 freeway mainline vehicle classification counts conducted in November and December of 2014 are summarized in **Table 2-17**. The data indicates that the vast majority of vehicles in the corridor are passenger vehicles. The passenger vehicles constitute even a higher percentage of traffic on Fridays and on Sundays than on typical workdays. Existing (2014) daily truck traffic on weekdays averages approximately 15 percent of total traffic.

Table 2-17. Freeway Mainline Vehicle Classification Counts

Day (Date)		NORTHBOUND					SOUTHBOUND				
		Passenger Vehicles	Large 2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total	Passenger Vehicles	Large 2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks	Total
I-15 North of Summit Avenue											
Thursday (11/20/2014)											
7-8 AM	Vehicles	1,775	70	14	236	2,095	3,858	57	12	285	4,212
	Percent	84.7%	3.3%	0.7%	11.3%	100%	91.6%	1.4%	0.3%	6.8%	100%
5-6 PM	Vehicles	3,878	59	15	160	4,112	2,529	89	16	289	2,923
	Percent	94.3%	1.4%	0.4%	3.9%	100%	86.5%	3.0%	0.5%	9.9%	100%
Daily	Vehicles	47,243	1,341	353	5,672	54,609	47,022	1,411	365	6,427	55,225
	Percent	86.5%	2.5%	0.6%	10.4%	100%	85.1%	2.6%	0.7%	11.6%	100%
Friday (12/05/2014)											
7-8 AM	Vehicles	1,928	57	14	195	2,194	3,840	27	10	292	4,169
	Percent	87.9%	2.6%	0.6%	8.9%	100%	92.1%	0.6%	0.2%	7.0%	100%
5-6 PM	Vehicles	4,417	33	17	200	4,667	3,008	73	39	209	3,329
	Percent	94.6%	0.7%	0.4%	4.3%	100%	90.4%	2.2%	1.2%	6.3%	100%
Daily	Vehicles	58,233	879	394	5,427	64,933	51,704	866	333	5,531	58,434
	Percent	89.7%	1.4%	0.6%	8.4%	100%	88.5%	1.5%	0.6%	9.5%	100%
Sunday (12/07/2014)											
Daily	Vehicles	45,238	412	156	1,899	47,705	52,912	479	197	3,042	56,630
	Percent	94.8%	0.9%	0.3%	4.0%	100%	93.4%	0.8%	0.3%	5.4%	100%
I-15 South of Cantu-Galleano Ranch Road											
Thursday (11/20/2014)											
7-8 AM	Vehicles	4,232	120	25	118	4,495	4,310	183	23	242	4,758
	Percent	94.1%	2.7%	0.6%	2.6%	100.0%	90.6%	3.8%	0.5%	5.1%	100%
5-6 PM	Vehicles	4,243	143	28	144	4,558	4,593	97	5	106	4,801
	Percent	93.1%	3.1%	0.6%	3.2%	100.0%	95.7%	2.0%	0.1%	2.2%	100%
Daily	Vehicles	67,447	2,713	545	4,082	74,787	68,033	2,735	554	4,066	75,388
	Percent	90.2%	3.6%	0.7%	5.5%	100.0%	90.2%	3.6%	0.7%	5.4%	100%
Friday (12/05/2014)											
7-8 AM	Vehicles	5,256	84	29	166	5,535	4,664	116	26	253	5,059
	Percent	95.0%	1.5%	0.5%	3.0%	100.0%	92.2%	2.3%	0.5%	5.0%	100%
5-6 PM	Vehicles	4,379	102	30	154	4,665	5,148	53	19	93	5,313
	Percent	93.9%	2.2%	0.6%	3.3%	100.0%	96.9%	1.0%	0.4%	1.8%	100%
Daily	Vehicles	75,336	1,650	545	3,676	81,207	75,967	1,691	616	3,657	81,931
	Percent	92.8%	2.0%	0.7%	4.5%	100.0%	92.7%	2.1%	0.8%	4.5%	100%
Sunday (12/07/2014)											
Daily	Vehicles	51,285	764	103	701	52,853	52,770	604	91	844	54,309
	Percent	97.0%	1.4%	0.2%	1.3%	100.0%	97.2%	1.1%	0.2%	1.6%	100%
Source: I-15 CP Traffic Study Report, March 2017.											

Mainline Average Speed and Vehicle-Hours Delay (VHD)

I-15 freeway directional (NB and SB) mainline vehicular travel speed data were extracted from Caltrans' Performance Measurement System (PeMS) database for the following segments along the study corridor:

- I-15 directional segments north of Summit Avenue (at Post Mile 10.1)
- I-15 directional segments south of Foothill Boulevard (at Post Mile 4.0)
- I-15 directional segments at Jurupa Street Overpass (at Post Mile 0.969)
- I-15 directional segments south of Cantu-Galleano Ranch Road (at Post Mile 49.52)

The data was extracted for each hour of a 24-hour period on three consecutive weekdays on a typical workweek, extending from Tuesday, November 18, 2014, through Thursday, November 20, 2014. A review of the speed data shows the following existing patterns:

- Speeds at the north end of the corridor (north of Summit Avenue) are high throughout the day, averaging a free-flow speed of almost 70 mph for every hour of the day. There are no noticeable peaks and valleys in average travel speeds by time of day or even during peak periods of travel within the northerly portions of the corridor.
- In contrast, the segments south of I-10 interchange show significant dips in travel speeds in the AM and PM peak periods. Specifically, for the I-15 mainline segments through the Jurupa Street Overpass, AM peak period (7:00 a.m. to 8:00 a.m.) travel speeds drop to approximately 55 mph in the NB direction and 30 mph in the SB direction, and PM peak period (5:00 p.m. to 6 :00 p.m.) speeds drop to 45 mph in the NB direction and to almost 20 mph in the SB direction. This is typical for corridors with recurring peak-period congestion.
- An irregularity in speed patterns occurred in the NB direction at the site south of Cantu-Galleano Ranch Road. There is a significant drop in speed in the PM peak hour on Tuesday as compared to the same period from other days. A check of PeMS incident data showed that there was a traffic collision at 5:56 PM on Tuesday just north of the survey site, which caused the traffic upstream to slow down.

The daily average speed for vehicles traveling in the study portion of I-15 corridor is 57.9 miles per hour.

Mainline Vehicle Occupancy Counts

Mainline vehicle occupancy counts were performed for the I-15 CP Traffic Study Report at two locations, north of Summit Avenue, and at Jurupa Street, for six one-hour periods - AM peak, PM peak, typical weekday off-peak, Friday evening, Sunday evening, and Saturday mid-day. The vehicle occupancy counts were used to determine the percentage of vehicles that would be eligible to use the Express Lanes for free (depending on the tolling policy ultimately adopted by SBCTA).

I-15 freeway mainline vehicle occupancy counts from December 2014 are summarized in **Table 2-18**. The data indicates the following:

Table 2-18. Freeway Mainline Vehicle Occupancy Counts

Day (Date)	Passenger Vehicles				Average Occupancy	Large 2-Axle Trucks				3-Axle Trucks	4+ Axle Trucks	Motor Cycles	Buses	Van Pools	Total
Occupancy	1 person	2 persons	3 persons	4+ persons		1 person	2 persons	3 persons	4+ persons						
I-15 Northbound (Observed from Jurupa Street Overpass)															
Thursday (11/20/2014)															
7:30-8:30 AM Percent	4,414 80.5%	558 10.2%	27 0.5%	1 0.0%	1.12	104 1.9%	41 0.7%	7 0.1%	0 0.0%	50 0.9%	243 4.4%	27 0.5%	5 0.1%	4 0.1%	5,481 100.0
12:30-1:30 PM Percent	3,368 63.4%	1,042 19.6%	123 2.3%	10 0.2%	1.29	133 2.5%	87 1.6%	6 0.1%	0 0.0%	66 1.2%	454 8.5%	15 0.3%	4 0.1%	2 0.0%	5,310 100.0
3:30-4:30 PM Percent	4,483 73.3%	1,052 17.2%	103 1.7%	0 0.0%	1.22	73 1.2%	70 1.1%	6 0.1%	0 0.0%	53 0.9%	241 3.9%	28 0.5%	3 0.0%	7 0.1%	6,119 100.0
Friday (12/05/2014)															
3:30-4:30 PM Percent	4,458 71.6%	1,278 20.5%	161 2.6%	7 0.1%	1.27	54 0.9%	8 0.1%	4 0.1%	0 0.0%	41 0.7%	175 2.8%	40 0.6%	0 0.0%	4 0.1%	6,230 100.0
Saturday (12/06/2014)															
3:30-4:30 PM Percent	3,899 61.7%	2,005 31.7%	79 1.3%	5 0.1%	1.36	59 0.9%	25 0.4%	4 0.1%	0 0.0%	35 0.6%	180 2.8%	27 0.4%	0 0.0%	0 0.0%	6,318 100.0
Sunday (12/07/2014)															
3:30-4:30 PM Percent	2,443 45.2%	2,205 40.8%	492 9.1%	122 2.3%	1.68	14 0.3%	11 0.2%	1 0.0%	2 0.0%	12 0.2%	69 1.3%	37 0.7%	1 0.0%	1 0.0%	5,410 100.0
I-15 Southbound (Observed from Bellegrave Avenue Overpass)															
Thursday (11/20/2014)															
7:30-8:30 AM Percent	3,943 79.0%	509 10.2%	23 0.5%	0 0.0%	1.12	144 2.9%	52 1.0%	6 0.1%	0 0.0%	41 0.8%	250 5.0%	15 0.3%	7 0.1%	1 0.0%	4,991 100.0
12:30-1:30 PM Percent	2,982 71.8%	637 15.3%	35 0.8%	1 0.0%	1.19	153 3.7%	37 0.9%	3 0.1%	0 0.0%	48 1.2%	244 5.9%	11 0.3%	5 0.1%	0 0.0%	4,156 100.0
3:30-4:30 PM Percent	4,151 77.1%	847 15.7%	23 0.4%	2 0.0%	1.18	125 2.3%	31 0.6%	5 0.1%	0 0.0%	29 0.5%	139 2.6%	26 0.5%	7 0.1%	2 0.0%	5,387 100.0
Friday (12/05/2014)															
3:30-4:30 PM Percent	3,694 72.2%	1,049 20.5%	54 1.1%	2 0.0%	1.24	96 1.9%	48 0.9%	8 0.2%	0 0.0%	26 0.5%	112 2.2%	25 0.5%	0 0.0%	4 0.1%	5,118 100.0
Saturday (12/06/2014)															
3:30-4:30 PM Percent	2,677 56.7%	1,594 33.7%	191 4.0%	78 1.7%	1.49	41 0.9%	19 0.4%	4 0.1%	0 0.0%	40 0.8%	52 1.1%	24 0.5%	1 0.0%	2 0.0%	4,723 100.0
Sunday (12/07/2014)															
3:30-4:30 PM Percent	1,909 45.3%	1,946 46.2%	188 4.5%	32 0.8%	1.59	22 0.5%	30 0.7%	3 0.1%	1 0.0%	7 0.2%	30 0.7%	38 0.9%	5 0.1%	2 0.0%	4,213 100.0
Source: I-15 CP Traffic Study Report, March 2017.															

Two-person HOVs are a significant portion of the vehicle stream in the weekday peak hour, especially the PM peak hour when they are 15 percent to 20 percent of all vehicles. 3-person and 4+ person HOVs are a minor component of the traffic stream during PM peak hours (0.4 percent to 2.7 percent depending on location).

Comparing the distributions for the 3:30-4:30 PM period on different days, the average vehicle occupancy is lowest on weekdays followed by Saturdays, with the highest being on Sundays.

Freeway Ramps

Ramp video counts were performed at the three system interchanges (SR-210, I-10, and SR-60). The counts were obtained over a 24-hour period for three days (a typical weekday, a Friday, and a Sunday) in the first week of December 2014. These counts were used to calibrate the SBTAM operations model. The Existing (2014) traffic volumes and LOS of the study area ramps are shown in **Table 2-19**. Two of the 47 existing ramps are shown to be below the acceptable LOS D at LOS E.

Table 2-19. Existing (2014) I-15 Ramp Volumes and LOS

Freeway Ramp	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
		Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Northbound									
Off-Ramp to Cantu-Galleano Ranch Rd	1	4,495	170	29.4	D	4,558	113	29.8	D
On-Ramp from Cantu-Galleano Ranch Rd	2	4,325	639	Weaving		4,445	427	Weaving	
Off-Ramp to SR-60 EB	1	4,964	840	Weaving		4,872	832	Weaving	
Off-Ramp to SR-60 WB	1	4,124	1,281	18.2	B	4,040	1,160	17.6	B
On-Ramp from SR-60 WB	2	2,843	1,336	11.2	B	2,880	1,408	11.8	B
On-Ramp from SR-60 EB	2	4,179	1,674	14.5	B	4,288	1,847	16.2	B
Off-Ramp to Jurupa St	1	5,853	534	29.5	D	6,135	221	28.6	D
On-Ramp from Jurupa St	1	5,319	613	Weaving		5,914	1,025	Weaving	
Off-Ramp to I-10 EB and WB	2	5,932	2,985	Weaving		6,939	3,152	Weaving	
On-Ramp from I-10 WB	1	2,947	830	19.9	B	3,787	752	21.7	C
On-Ramp from I-10 EB	2	3,777	1,195	Weaving		4,539	2,107	Weaving	
Off-Ramp to Fourth St	1	4,143	983	Weaving		5,538	690	Weaving	
On-Ramp from Fourth St	1	3,989	219	16.5	B	5,956	847	25.7	C
Off-Ramp to Foothill Blvd	2	4,208	1,012	8.2	A	6,803	1,448	16.8	B
Loop On-Ramp from Foothill Blvd	1	3,196	130	16.1	B	5,355	770	27.8	C
Direct On-Ramp from Foothill Blvd	1	3,326	157	16.5	B	6,125	285	26.3	C
Off-Ramp to Baseline Rd	1	3,483	472	19.6	B	6,410	929	33.0	D
On-Ramp from Baseline Rd	1	3,011	461	Weaving		5,481	494	Weaving	
Off-Ramp to SR-210 EB	2	3,472	1,342	Weaving		5,975	2,636	Weaving	
Off-Ramp to SR-210 WB	1	2,130	513	2.4	A	3,339	552	7.1	A
On-Ramp from SR-210 EB and WB	2	1,617	958	Weaving		2,787	1,541	Weaving	

Table 2-19. Existing (2014) I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
		Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
Off-Ramp to Beech Ave/Summit Ave	1	2,575	354	Weaving		4,328	875	Weaving	
On-Ramp from Beech Ave/Summit Ave	1	2,221	207	13.1	B	3,453	373	18.2	B
I-15 Southbound									
Off-Ramp to Beech Ave/Summit Ave	1	4,212	195	20.7	C	2,923	200	15.8	B
On-Ramp from Beech Ave/Summit Ave	1	4,017	1,262	Weaving		2,723	488	Weaving	
Off-Ramp to SR-210 EB and WB	2	5,279	1,821	Weaving		3,211	1,261	Weaving	
On-Ramp from SR-210 WB	2	3,458	2,714	21.7	C	1,950	1,653	8.3	A
On-Ramp from SR-210 EB	1	6,172	1,024	22.0	C	3,603	487	12.8	B
Off-Ramp to Baseline Rd	1	7,196	644	29.2	D	4,090	491	20.2	C
On-Ramp from Baseline Rd	1	6,552	915	32.9	D	3,599	560	20.3	C
Off-Ramp to Foothill Blvd	1	7,467	722	28.5	D	4,159	644	14.8	B
Loop On-Ramp from Foothill Blvd	1	6,745	665	31.0	D	3,515	515	19.1	B
Direct On-Ramp from Foothill Blvd	1	7,410	1,007	35.9	E	4,030	992	24.5	C
Off-Ramp to Fourth St	1	8,417	1,059	35.2	E	5,022	818	25.2	C
On-Ramp from Fourth St	1	7,358	430	Weaving		4,204	1,320	Weaving	
Off-Ramp to I-10 EB	1	7,788	976	Weaving		5,524	736	Weaving	
Off-Ramp to I-10 WB	2	6,812	2,217	21.9	C	4,788	1,292	16.7	B
On-Ramp from I-10 EB	1	4,595	1,660	Weaving		3,496	1,281	Weaving	
On-Ramp from I-10 WB	1	6,255	1,858	Weaving		4,777	1,249	Weaving	
Off-Ramp to Jurupa St	2	8,113	1,371	Weaving		6,026	574	Weaving	
On-Ramp from Jurupa St	1	6,742	310	Weaving		5,452	804	Weaving	
Off-Ramp to SR-60 EB and WB	2	7,052	3,818	Weaving		6,256	2,978	Weaving	
On-Ramp from SR-60 EB	1	3,234	1,322	30.3	D	3,278	1,037	27.7	C
On-Ramp from SR-60 WB	1	4,556	850	27.2	C	4,315	1,000	26.5	C
Off-Ramp to Cantu-Galleano Ranch Rd	1	5,406	589	27.8	C	5,315	662	27.2	C
Loop On-Ramp from Cantu-Galleano Ranch Rd	1	4,817	50	22.0	C	4,653	165	21.4	C
Direct On-Ramp from Cantu-Galleano Ranch Rd	1	4,867	53	28.4	D	4,818	173	28.5	D
Source: I-15 CP Traffic Study Report, March 2017.									

The off-ramp queuing analysis is shown in **Table 2-20**. None of the queues were found to exceed the storage capacity of the off-ramps. The on-ramp metering analysis is shown in **Table 2-21**. The queues exceed storage length for the on-ramp metering in the AM peak hour at two locations and in the PM peak hour at four locations.

Table 2-20. Off-Ramp Queuing Analysis- Existing (2014) Conditions

Freeway Ramp	Storage (ft)	AM Peak Hour	PM Peak Hour
		Queue ¹ (ft)	Queue ¹ (ft)
I-15 Northbound			
Off-Ramp to Cantu-Galleano Ranch Rd	1,625	47	38
Off-Ramp to Jurupa St	1,275	258	84
Off-Ramp to Fourth St	1,250	252	168
Off-Ramp to Arrow Rte	Not Yet Constructed		
Off-Ramp to Foothill Blvd	1,700	381	432
Off-Ramp to Baseline Rd	1,540	232	345
Off-Ramp to Beech Ave/Summit Ave	1,160	132	383
Off-Ramp to Duncan Canyon Rd	Not Yet Constructed		
I-15 Southbound			
Off-Ramp to Duncan Canyon Rd	Not Yet Constructed		
Off-Ramp to Beech Ave/Summit Ave	2,050	139	171
Off-Ramp to Baseline Rd	1,750	350	164
Off-Ramp to Foothill Blvd	1,740	247	328
Off-Ramp to Arrow Rte	Not Yet Constructed		
Off-Ramp to Fourth St	1,625	203	298
Off-Ramp to Jurupa St	1,750	511	203
Off-Ramp to Cantu-Galleano Ranch Rd	1,440	117	121
¹ Note: Queue indicates Synchro 95th percentile queue length (ft) for the turning movement with the longest queue. Source: <i>I-15 CP Traffic Study Report</i> , March 2017.			

Table 2-21. On-Ramp Metering Analysis - Existing (2014) Conditions

Freeway Ramp	Metered Lanes		Existing Storage Length (ft)	AM Peak Hour				PM Peak Hour			
				*PCEs in Metered Lanes		Minimum Storage (ft) ¹		PCEs in Metered Lanes		Minimum Storage (ft) ¹	
	GP	HOV ²		GP	HOV ²	GP	HOV ²	GP	HOV ²	GP	HOV ²
NB On-Ramp from Jurupa St	2	0	930	750	-	761	-	1,108	-	1,124	-
NB On-Ramp from Fourth St	2	0	1,275	246	-	249	-	869	-	882	-
NB Loop On-Ramp from Foothill Blvd	Not Metered			139	-	Not Metered		781	-	Not Metered	
NB Direct On-Ramp from Foothill Blvd	Not Metered			201	-	Not Metered		295	-	Not Metered	
I-15 SB Loop On-Ramp from Foothill Blvd	1	0	1,030	719	-	1,459	-	541	-	1,097	-
I-15 SB Direct On-Ramp from Foothill Blvd	2	0	1,055	1,033	-	1,048	-	997	-	1,011	-
SB Direct On-Ramp from Foothill Blvd	2	0	725	1,033	-	535	-	1,359	-	1,379	-
SB On-Ramp from Jurupa St	2	0	1,165	444	-	450	-	876	-	889	-
* PCE: Passenger Car Equivalency ¹ Minimum Storage is the minimum recommended in the Highway Design Manual based on 7% of peak hour demand per lane in passenger cars per hour per lane (pcphpl). Average vehicle spacing is assumed to be 29 ft. ² HOV preferential lanes may be metered or operated as un-metered HOV bypass lanes. Source: I-15 CP Traffic Study Report, March 2017.											

Average Speed and Vehicle-Hours of Delay

The daily average speed for vehicles traveling in the study portion of I-15 corridor is 57.9 miles per hour. The Existing (2014) vehicle hours of delay in the sub-region used for VHD analysis are shown in **Table 2-22**.

Table 2-22. Existing (2014) Vehicle Hours of Delay in Analysis Area

Analysis Period	Existing (2014)
AM 3-hr Peak	5,367,271
PM 4-hr Peak	10,943,656
Mid-day 3-Hours	3,789,829
Night 14 hours	472,211
Daily	20,572,967
Source: I-15 CP, Traffic Study Report, 2017.	

Intersections

The Existing (2014) LOS analysis at the study area intersections is shown in **Table 2-23**. All study area intersections operate at the acceptable levels of services under the Existing (2014) conditions.

Table 2-23. Existing (2014) Study Intersection Traffic Delays and LOS

Intersection	Jurisdiction	LOS Target	AM Peak Hour		PM Peak Hour	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS
Cherry Ave/Wilson Ave/Beech Ave	Fontana	C	28.0	C	27.4	C
I-15 SB Ramps/Beech Ave	Caltrans	D	43.0	D	9.8	A
I-15 NB Ramps/Beech Ave	Caltrans	D	14.6	B	22.3	C
Falcon Ridge/Summit Heights Gateway/Beech Ave	Fontana	C	28.2	C	29.5	C
Pecan Ave/Shelby Pl/Baseline Rd	Rancho Cucamonga	D	16.9	B	14.1	B
I-15 SB Ramps/Baseline Rd	Caltrans	D	28.2	C	23.6	C
East Ave/Baseline Rd	Rancho Cucamonga	D	49.5	D	23.3	C
I-15 NB Ramps/Baseline Rd	Caltrans	D	23.3	C	28.4	C
American Way/Baseline Rd	Fontana	C	27.9	C	17.6	B
Day Creek Blvd/E. Foothill Blvd	Rancho Cucamonga	D	22.4	C	44.1	D
I-15 SB Ramps/E. Foothill Blvd	Caltrans	D	13.3	B	12.2	B
I-15 NB Ramps/E. Foothill Blvd	Caltrans	D	19.1	B	20.1	C
Marketplace/E. Foothill Blvd	Rancho Cucamonga	D	38.4	D	45.5	D
Buffalo Ave/Franklin Ave/E. Fourth St	Ontario	D	28.4	C	43.5	D
I-15 SB Ramps/E. Fourth St	Caltrans	D	52.9	D	44.0	D
I-15 NB Ramps/E. Fourth St	Caltrans	D	40.2	D	43.5	D
Santa Anita/Wineville Ave/E. Fourth St	Ontario	D	29.4	C	31.0	C
S. Rockefeller Ave/Toyota Way/E. Jurupa St	Ontario	D	29.1	C	28.2	C

Table 2-23. Existing (2014) Study Intersection Traffic Delays and LOS (continued)

Intersection	Jurisdiction	LOS Target	AM Peak Hour		PM Peak Hour	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS
I-15 SB Ramps/E. Jurupa St	Caltrans	D	28.1	C	20.3	C
I-15 NB Ramps/E. Jurupa St	Caltrans	D	17.0	B	32.0	C
Auto Center Dr/E. Jurupa St	Ontario	D	34.1	C	42.4	D
Hamner Ave/Milliken Ave/Cantu-Galleano Ranch Rd	Eastvale	D	25.3	C	21.9	C
I-15 SB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	19.1	B	22.4	C
I-15 NB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	15.6	B	15.5	B
Wineville Ave/Cantu-Galleano Ranch Rd	Jurupa Valley	D	18.3	B	20.4	C

Source: I-15 CP, Traffic Study Report, 2017.

2.1.9.3 Environmental Consequences

No Build Alternative

The No Build alternative maintains the existing lane configurations of the I-15 freeway with no additional lanes or any other improvements that increase capacity and improve travel conditions within the project limits.

Build Alternative

Temporary

The project would result in the partial mainline lane and full freeway facility closures for various construction activities, such as the setting up and taking down of falsework for structures construction, installation of overhead signs, concrete pouring, installation of tolling system, installation of vehicle detection systems, installation of pavement striping, and ramp improvements. Closures would be needed intermittently, and would be limited to nighttime only when the traffic volumes are the lowest. During closures, traffic would be detoured to adjacent ramps and local streets. Local street closures may also be needed to accommodate localized construction activities.

A TMP is prepared for the project that includes strategies and measures to avoid and minimize disruption to the public and community during construction. The TMP would be updated as needed during the design and construction phases of the project. According to the TMP, closure hours would be prepared in coordination with Caltrans and the project team, and would be limited to nighttime or off-peak periods. These detour routes would avoid routing traffic through local streets in communities and neighborhoods that are adjacent to the closure. Detour routes would be identified, coordinated, and approved by Caltrans and the affected local agencies prior to the closure. Advance planning, detour strategies, and public notifications would be provided for each full facility closure. A contingency plan would also be prepared for high impact closures. The contingency plan would identify operations, equipment, processes, and materials that may fail and cause delayed opening of lane closures. The plan would also identify key operational decision points with a timeline listing the expected completion time of each critical

path activity, as well as list and describe any and all standby equipment and secondary material suppliers to be available to complete the operations in the event of equipment failure or unexpected loss of material. The plan would identify the lines of communication, and contact information of all involved personnel, including contractor's project manager, the engineer, Caltrans construction inspector, CHP area commander, and other applicable personnel. In addition, emergency providers and police departments would be notified in advance about all planned closures and detour routes. Upon construction completion, detour signage and traffic signal timings would be restored to preconstruction conditions.

A draft construction staging plan was devised for Alternative 2 that would maintain the existing number of lanes throughout construction. A detailed and updated plan would be devised and implemented to help minimize delays and congestion associated with construction activities. Construction of interchange improvements (consisting of freeway ramp reconstruction, local arterial improvements, and undercrossing structure widening) is envisioned to be staggered throughout the corridor to minimize affecting two consecutive interchanges or closing two consecutive on- or off-ramps at the same time. If feasible, arterials and undercrossing structure improvements that add capacity over the existing condition would be constructed in the earlier stages in efforts to ease traffic congestion during subsequent construction stages. The following construction stages are proposed:

Stage 1

The work to be completed includes outside widening of the freeway mainline and widening of bridge structures on the inside. The travel lanes would be shifted to allow room for construction work and the number of travel lanes on the freeway would be maintained during construction. The minimum lane width is expected to be maintained at 11 feet.

Stage 2

The work to be completed includes inside widening of the freeway mainline, bridge structures, and improvements of ramps and ramp-to-freeway tie-in. The travel lanes would be shifted to allow room for construction work and the number of travel lanes on the freeway would be maintained during construction.

The widening of the freeway structures would also affect UPRR and BNSF railroad operations. Coordination with the railroad would be required for erecting and taking down of falsework, potentially other construction activities, and finalize the railroad closure hours that would minimize the impacts to railroad operations. Local streets that are affected by railroad closures would be coordinated with local agencies for closures.

Bicycle and Pedestrian Facilities

Local roads would always be accessible to pedestrian and bicyclists, except for short terms during temporary closures within limited areas. During arterial closures, vehicular, bicycle, and pedestrian traffic would be redirected to alternate routes. As part of the TMP, prior to construction activities, coordination regarding street closures will include pedestrian and bicycle facilities detours. Closure of streets that are located in close proximity of one another would not coincide, such that there would be convenient nearby alternate routes available for pedestrians.

The project would have minimal impacts on accessibility for vehicles, bicycles and pedestrians during construction activities.

Permanent

Opening Year (2024) Traffic Conditions

Mainline Volumes and Level of Service

Dynamic pricing would be used to manage the Express Lanes traffic so it would not exceed 1,650 vehicles/lane/hour (the threshold between LOS C and D) at the highest-volume section of the Express Lanes. The 1,650 vehicles per lane per hour would result in a minimum operating speed of 45 mph. In most pricing algorithms on existing express lane facilities, traffic density is used to monitor changes in volume and speed. Traffic density, by definition, can be related to both volume and travel speed. The traffic volume is defined as the number of vehicles passing a certain point within an established time period. Therefore, the traffic volume must be considered in combination with the average speed of the vehicles, since a low vehicle count can occur because of low traffic volumes (no congestion) or during high congestion with extremely slow moving traffic.

The proposed opening year (2024) No Build Alternative I-15 Mainline Traffic Volume, Densities and LOS are shown in **Table 2-24**. According to the table, traffic conditions for SB traffic would be at LOS E or F in the AM peak hour within most of the freeway segments south of Summit Avenue. The segments south of I-10 in the SB direction would be at an unacceptable LOS of E or F within the PM peak hour. NB traffic would be at an unacceptable LOS of E or F at the segment between Jurupa Street and I-10 in both the AM and PM peak hours.

The proposed opening year (2024) Build Alternative I-15 Mainline and Express Lanes Traffic Densities and LOS are shown in **Table 2-25**. The analysis shows that GP lanes LOS would improve with the project at some of the segments, but there would still be capacity problems in some of the GP lane segments, especially in the SB direction between I-10 and SR-60. However, Build Alternative LOS compared with the No Build Alternative LOS shows that although there were locations within the GP lanes, where the Build Alternative LOS was at an unacceptable level of D or below, Build Alternative condition would have a lower volume than the No Build Alternative condition. This indicates that traffic flow would improve at these locations with the project as shown in **Table 2-26**.

Table 2-27 shows the LOS for the Express Lanes access points Densities and LOS compared to at the same locations for the No Build Alternative conditions. Under the No Build conditions, LOS deficiencies would occur at four locations in the AM peak hour and at two locations in the PM peak hour. The Build conditions show improvements at all six of those locations. However, LOS deficiencies occur at two other locations in the Build condition. Further study of those locations using microsimulation suggests that the LOS at these two locations would in fact be adequate, and that the apparent LOS deficiency arises from the fact that the HCM method has imperfections when applied to express lane access points.

Table 2-24. 2024 No Build Alternative I-15 Mainline Traffic Volume, Densities and LOS

Freeway Segment	Analysis Type	# of Lanes	AM Peak Hour			PM Peak Hour		
			Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound								
Cantu-Galleano Ranch Rd to SR-60	Weaving*	4+Aux	4,904	21.7	C	6,730	22.4	C
SR-60 to Jurupa St	Basic	4	6,308	26.9	D	7,410	33.1	D
Jurupa St to I-10	Weaving	4+Aux	6,399	>Capacity	F	7,975	>Capacity	F
I-10 to Fourth St	Weaving	5+Aux	5,685	22.3	C	7,289	26.6	C
Fourth St to Arrow Rte	Basic	4	4,912	20.9	C	7,373	32.6	D
Arrow Rte to Foothill Blvd	Basic	4	4,912	20.9	C	7,373	32.6	D
Foothill Blvd to Baseline Rd	Basic	4	4,181	17.9	B	7,045	30.5	D
Baseline Rd to SR-210	Weaving	4+Aux	4,013	17.0	B	6,266	29.3	D
SR-210 to Summit Ave	Weaving	4+Aux	3,275	14.1	B	5,723	26.9	C
Summit Ave to Duncan Canyon Rd	Basic	4	3,165	13.8	B	5,419	22.8	C
Duncan Canyon Rd to Sierra Ave	Basic	4	3,121	13.6	B	5,291	22.3	C
I-15 Southbound								
Sierra Ave to Duncan Canyon Rd	Basic	4	5,367	22.7	C	3,809	16.5	B
Duncan Canyon Rd to Summit Ave	Basic	4	5,630	23.8	C	3,942	17.1	B
Summit Ave to SR-210	Weaving	4+Aux	6,391	>Capacity	F	4,121	18.1	B
SR-210 to Baseline Rd	Weaving	4+Aux	8,417	39.1	E	5,145	20.9	C
Baseline Rd to Foothill Blvd	Basic	4	8,838	47.0	F	5,387	22.8	C
Foothill Blvd to Arrow Rte	Basic	4	9,428	54.7	F	6,464	28.0	D
Arrow St to Fourth St	Basic	4	9,428	54.7	F	6,464	28.0	D
Fourth St to I-10	Weaving	5+Aux	9,029	34.8	D	7,033	27.3	C
I-10 to Jurupa St	Weaving	4+Aux	9,977	>Capacity	F	7,731	>Capacity	F
Jurupa St to SR-60	Weaving	3+Aux	9,238	>Capacity	F	8,088	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	Basic	4	8,308	41.6	E	7,803	36.3	E
Note: NB I-15 from Cantu-Galleano Ranch Rd to SR-60 operates as a basic section in the PM peak hour. Source: I-15 CP Traffic Study Report, March 2017.								

Table 2-25. 2024 Build Alternative I-15 Mainline and Express Lanes Traffic Densities and LOS

Freeway Segment	Analysis Type	# of Lanes	AM Peak Hour						PM Peak Hour					
			General Purpose Lanes			Express Lanes			General Purpose Lanes			Express Lanes		
			Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound														
Cantu-Galleano Ranch Rd to SR-60	Weaving	4+Aux	4,410	19.3	B	554	4.5	A	5,215	24.2	C	2,200	17.8	B
SR-60 to Jurupa St	Basic	5	5,863	19.6	C	554	4.5	A	6,659	22.1	C	2,200	17.8	B
Jurupa St to I-10	Weaving	5+Aux	5,952	20.3	C	554	4.5	A	7,271	>Capacity	F	2,200	17.8	B
I-10 to Fourth St	Weaving	5+Aux	5,389	21.1	C	409	3.3	A	7,158	26.4	C	1,865	15.1	B
Fourth St to Arrow Rte	Basic	5	4,613	15.7	B	409	3.3	A	7,287	24.1	C	1,865	15.1	B
Arrow Rte to Foothill Blvd	Basic	5	4,613	15.7	B	409	3.3	A	7,287	24.1	C	1,865	15.1	B
Foothill Blvd to Baseline Rd	Basic	4	3,849	16.5	B	409	3.3	A	6,630	28.3	D	1,865	15.1	B
Baseline Rd to SR-210	Weaving	4+Aux	3,656	15.4	B	409	3.3	A	6,084	28.4	D	1,247	10.1	A
SR-210 to Summit Ave	Weaving	4+Aux	2,907	12.4	B	409	3.3	A	5,099	23.7	C	1,247	10.1	A
Summit Ave to Duncan Canyon Rd	Basic	4	2,786	12.4	B	409	3.3	A	4,645	19.7	C	1,247	10.1	A
Duncan Canyon Rd to Sierra Ave	Basic	4	3,150	13.8	B	Not Yet Constructed			5,708	24.2	C	Not Yet Constructed		
I-15 Southbound														
Sierra Ave to Duncan Canyon Rd	Basic	4	5,488	23.3	C	Not Yet Constructed			3,856	16.7	B	Not Yet Constructed		
Duncan Canyon Rd to Summit Ave	Basic	4	4,441	19.0	C	1,327	10.7	A	3,055	13.5	B	950	7.7	A
Summit Ave to SR-210	Weaving	4+Aux	5,249	>Capacity	F	1,327	10.7	A	3,264	14.0	B	950	7.7	A
SR-210 to Baseline Rd	Weaving	4+Aux	7,623	35.2	E	1,327	10.7	A	4,480	18.2	B	950	7.7	A
Baseline Rd to Foothill Blvd	Basic	4	7,175	32.2	D	2,358	19.1	C	4,098	17.6	B	1,727	14.0	B
Foothill Blvd to Arrow Rte	Basic	4	8,247	40.6	E	2,358	19.1	C	5,362	22.7	C	1,727	14.0	B
Arrow Rte to Fourth St	Basic	4	8,247	40.6	E	2,358	19.1	C	5,362	22.7	C	1,727	14.0	B
Fourth St to I-10	Weaving	5+Aux	7,249	27.5	C	2,835	23.0	C	5,953	23.1	C	1,727	14.0	B
I-10 to Jurupa St	Weaving	5+Aux	8,058	>Capacity	F	2,625	21.3	C	6,511	>Capacity	F	2,002	16.2	B
Jurupa St to SR-60	Weaving	4+Aux	7,249	>Capacity	F	2,625	21.3	C	6,926	>Capacity	F	2,002	16.2	B
SR-60 to Cantu-Galleano Ranch Rd	Basic	4	5,972	25.7	C	2,625	21.3	C	6,232	26.5	D	2,002	16.2	B
Source: I-15 CP Traffic Study Report, March 2017.														

Source: I-15 CP Traffic Study Report, March 2017.

Table 2-26. 2024 Freeway Mainline No Build and Build Alternatives LOS – AM and PM Peak Hours

Freeway Segment	No Build Alternative (AM)			Build Alternative (AM)			No Build Alternative (PM)			Build Alternative (PM)		
	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound												
Cantu-Galleano Ranch Rd to SR-60	4,904	21.7	C	4,410	19.3	B	6,730	22.4	C	5,215	24.2	C
SR-60 to Jurupa St	6,308	26.9	D	5,863	19.6	C	7,410	33.1	D	6,659	22.1	C
Jurupa St to I-10	6,399	>Capacity	F	5,952	20.3	C	7,975	>Capacity	F	7,271	>Capacity	F
I-10 to Fourth St	5,685	22.3	C	5,389	21.1	C	7,289	26.6	C	7,158	26.4	C
Fourth St to Arrow Rte	4,912	20.9	C	4,613	15.7	B	7,373	32.6	D	7,287	24.1	C
Arrow Rte to Foothill Blvd	4,912	20.9	C	4,613	15.7	B	7,373	32.6	D	7,287	24.1	C
Foothill Blvd to Baseline Rd	4,181	17.9	B	3,849	16.5	B	7,045	30.5	D	6,630	28.3	D
Baseline Rd to SR-210	4,013	17.0	B	3,656	15.4	B	6,266	29.3	D	6,084	28.4	D
SR-210 to Summit Ave	3,275	14.1	B	2,907	12.4	B	5,723	26.9	C	5,099	23.7	C
Beech/Summit Ave to Duncan Canyon Rd	3,165	13.8	B	2,786	12.4	B	5,419	22.8	C	4,645	19.7	C
Duncan Canyon Rd to Sierra Ave	3,121	13.6	B	3,150	13.8	B	5,291	22.3	C	5,708	24.2	C
I-15 Southbound												
Sierra Ave to Duncan Canyon Rd	5,367	22.7	C	5,488	23.3	C	3,809	16.5	B	3,856	16.7	B
Duncan Canyon Rd to Summit Ave	5,630	23.8	C	4,441	19.0	C	3,942	17.1	B	3,055	13.5	B
Summit Ave to SR-210	6,391	>Capacity	F	5,249	>Capacity	F	4,121	18.1	B	3,264	14.0	B
SR-210 to Baseline Rd	8,417	39.1	E	7,623	35.2	E	5,145	20.9	C	4,480	18.2	B
Baseline Rd to Foothill Blvd	8,838	47.0	F	7,175	32.2	D	5,387	22.8	C	4,098	17.6	B
Foothill Blvd to Arrow Rte	9,428	54.7	F	8,247	40.6	E	6,464	28.0	D	5,362	22.7	C
Arrow Rte to Fourth St	9,428	54.7	F	8,247	40.6	E	6,464	28.0	D	5,362	22.7	C
Fourth St to I-10	9,029	34.8	D	7,249	27.5	C	7,033	27.3	C	5,953	23.1	C
I-10 to Jurupa St	9,977	>Capacity	F	8,058	>Capacity	F	7,731	>Capacity	F	6,511	>Capacity	F
Jurupa St to SR-60	9,238	>Capacity	F	7,249	>Capacity	F	8,088	>Capacity	F	6,926	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	8,308	41.6	E	5,972	25.7	C	7,803	36.3	E	6,232	26.5	D
Source: I-15 CP Traffic Study Report, March 2017.												

Table 2-27. 2024 Build Alternative Express Lanes Access Points Densities and LOS

Freeway Segment Access Point	Analysis Type		# of Lanes		2024 No Build Alternative						2024 Build Alternative					
					AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	No Build	Build	No Build	Build	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound																
Cantu-Galleano Ranch Rd	Basic	Weaving	3	3+2EL	4,366	24.0	C	6,264	41.2	E	4,421	17.5	B	6,898	28.8	D
Jurupa St	Basic	Weaving*	4	5+2EL	5,803	24.2	C	7,055	30.8	D	5,910	12.3	B	8,518	>Capacity	F
Arrow Route	Basic	Weaving*	4	5+2EL	4,912	20.9	C	7,373	32.6	D	5,022	27.6	C	9,152	18.7	C
Baseline Rd	Basic	Weaving	4	4+2EL	3,566	15.3	B	5,696	23.6	C	3,626	12.0	B	6,888	23.6	C
Beach-Duncan Rd	Basic	Basic	4	4+1EL	3,165	13.8	B	5,419	22.8	C	3,195	9.4	A	5,892	16.5	B
I-15 Southbound																
Beach-Duncan Rd	Basic	Diverge	4	4+1EL	5,630	23.8	C	3,942	17.1	B	5,459	32.2	D	3,760	22.9	C
Baseline Rd	Basic	Weaving	4	4+2EL	7,786	36.5	E	4,669	19.8	C	8,336	30.9	D	4,971	17.7	B
Arrow Rte	Basic	Weaving*	4	4+2EL	9,428	54.7	F	6,464	28.0	D	10,605	25.5	C	7,089	48.0	F
Jurupa St	Basic	Basic	4	5+2EL	8,841	48.2	F	7,188	32.1	D	9,490	22.8	C	7,995	19.0	C
Cantu-Galleano Ranch Rd	Basic	Weaving	3	3+2EL	7,738	76.3	F	7,385	62.3	F	7,986	38.8	E	7,793	34.1	D
*NB Jurupa St Access and SB Arrow Rte Access operate as basic sections in the AM peak hour, and NB Arrow Rte Access operates as a basic section in the PM peak hour. Source: I-15 CP Traffic Study Report, March 2017.																

Freeway Ramps

The proposed opening year (2024) No Build Alternative traffic volumes and LOS on study ramps are shown in **Table 2-28**. Nine SB ramps would be at an unacceptable LOS E or F in the AM peak hour. In the PM peak hour, two NB and five SB ramps would be at an unacceptable LOS E or F.

Table 2-28. 2024 No Build Alternative I-15 Ramp Volumes and LOS

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Northbound										
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	4,547	181	29.4	D	6,517	252	39.7	E
On-Ramp from Cantu-Galleano Ranch Rd	Merge	2	4,366	538	Weaving		6,265	465	12.6	F
Off-Ramp to SR-60 EB	Diverge	1	4,904	931	Weaving		6,730	994	23.3	C
Off-Ramp to SR-60 WB	Diverge	1	3,973	835	16.1	B	5,736	1,030	24.6	C
On-Ramp from SR-60 WB	Merge	2	3,138	1,524	13.9	B	4,706	1,004	17.2	B
On-Ramp from SR-60 EB	Merge	2	4,662	1,647	15.6	B	5,710	1,701	19.6	B
Off-Ramp to Jurupa St	Diverge	1	6,308	505	30.8	D	7,410	355	34.2	D
On-Ramp from Jurupa St	Weave	1	5,803	596	Weaving		7,055	920	Weaving	
Off-Ramp to I-10 EB and WB	Weave	2	6,399	3,026	Weaving		7,975	3,312	Weaving	
On-Ramp from I-10 WB	Merge	1	3,373	852	21.4	C	4,663	672	24.0	C
On-Ramp from I-10 EB	Weave	2	4,225	1,460	Weaving		5,335	1,953	Weaving	
Off-Ramp to Fourth St	Weave	1	4,738	989	Weaving		6,074	709	Weaving	
On-Ramp from Fourth St	Merge	1	4,696	216	18.2	B	6,580	793	26.1	C
Off-Ramp to Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
On-Ramp from Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
Off-Ramp to Foothill Blvd	Diverge	2	4,912	1,025	9.9	A	7,373	1,402	17.8	B
Loop On-Ramp from Foothill Blvd	Merge	1	3,887	130	18.3	B	5,971	758	29.7	D
Direct On-Ramp from Foothill Blvd	Merge	1	4,017	165	18.8	B	6,729	315	28.5	D
Off-Ramp to Baseline Rd	Diverge	1	4,181	615	7.6	A	7,045	1,349	17.6	B
On-Ramp from Baseline Rd	Weave	1	3,566	446	Weaving		5,696	570	Weaving	
Off-Ramp to SR-210 EB	Weave	2	4,013	1,332	Weaving		6,266	1,831	Weaving	
Off-Ramp to SR-210 WB	Diverge	1	2,681	480	4.5	A	4,435	335	10.4	B
On-Ramp from SR-210 EB and WB	Weave	2	2,201	1,074	Weaving		4,100	1,623	Weaving	
Off-Ramp to Beech Ave/Summit	Weave	1	3,275	376	Weaving		5,723	823	Weaving	
On-Ramp from Beech Ave/Summit Ave	Merge	1	2,899	266	16.0	B	4,900	519	24.4	C
Off-Ramp to Duncan Canyon Rd	Diverge	2	3,165	107	< 1.0	A	5,419	236	1.3	A
On-Ramp from Duncan Canyon Rd	Merge	1	3,058	63	14.9	B	5,183	108	22.1	C

Table 2-28. 2024 No Build Alternative I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Southbound										
Off-Ramp to Duncan Canyon Rd	Diverge	1	5,367	50	24.8	C	3,809	79	18.9	B
On-Ramp from Duncan Canyon Rd	Merge	1	5,317	313	18.6	B	3,730	212	12.7	B
Off-Ramp to Beech Ave/Summit Ave	Diverge	1	5,630	329	27.2	C	3,942	247	20.4	C
On-Ramp from Beech Ave/Summit Ave	Weave	1	5,301	1,090	Weaving		3,695	426	Weaving	
Off-Ramp to SR-210 EB & WB	Weave	2	6,391	1,851	Weaving		4,121	1,356	Weaving	
On-Ramp from SR-210 WB	Merge	1	4,540	2,897	34.3	D	2,765	1,911	20.7	C
On-Ramp from SR-210 EB	Weave	1	7,437	978	Weaving		4,676	469	Weaving	
Off-Ramp to Baseline Rd	Weave	2	8,417	631	Weaving		5,145	476	Weaving	
On-Ramp from Baseline Rd	Merge	1	7,786	713	26.7	C	4,669	513	18.8	B
On-Ramp from Baseline Rd	Merge	1	8,499	341	31.6	F	5,182	205	18.6	B
Off-Ramp to Foothill Blvd	Diverge	1	8,838	1,044	35.7	F	5,387	643	19.9	B
Loop On-Ramp from Foothill Blvd	Merge	1	7,794	591	34.0	D	4,744	596	23.9	C
Direct On-Ramp from Foothill Blvd	Merge	1	8,385	1,043	39.9	F	5,340	1,124	30.0	D
Off-Ramp to Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
On-Ramp from Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
Off-Ramp to Fourth St	Diverge	1	9,428	913	37.7	E	6,464	775	27.7	C
On-Ramp from Fourth St	Weave	1	8,515	514	Weaving		5,689	1,343	Weaving	
Off-Ramp to I-10 EB	Weave	1	9,029	799	Weaving		7,033	793	Weaving	
Off-Ramp to I-10 WB	Diverge	2	8,230	2,143	29.0	D	6,240	1,424	23.1	C
On-Ramp from I-10 EB	Weave	1	6,087	1,802	Weaving		4,816	1,408	Weaving	
On-Ramp from I-10 WB	Weave	1	7,889	2,087	Weaving		6,224	1,507	Weaving	
Off-Ramp to Jurupa St	Weave	2	9,977	1,136	Weaving		7,731	543	Weaving	
On-Ramp from Jurupa St	Weave	1	8,841	397	Weaving		7,188	901	Weaving	
Off-Ramp to SR-60 EB and WB	Weave	2	9,238	3,631	Weaving		8,088	3,073	Weaving	
On-Ramp from SR-60 EB	Merge	1	5,607	1,490	43.5	F	5,015	1,479	39.8	E
On-Ramp from SR-60 WB	Merge	1	7,097	1,210	45.7	F	6,494	1,309	40.4	F
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	8,308	570	45.4	F	7,803	418	39.9	F
Loop On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	7,738	66	41.4	F	7,385	175	38.6	F
Direct On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	7,804	167	50.2	F	7,560	268	48.3	F
Source: I-15 CP Traffic Study Report, March 2017.										

Source: I-15 CP Traffic Study Report, March 2017.

The proposed opening year (2024) Build Alternative traffic volumes and LOS of study ramps are shown in **Table 2-29**. **Table 2-30** compares the ramps LOS for the Build and No Build Conditions. The comparison table shows that traffic conditions on the ramps improve with the project in 2024. Only two of the ramps remain at an unacceptable LOS E with the project.

Table 2-29. 2024 Build Alternative I-15 Ramp Volumes and LOS

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Northbound										
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	4,038	171	27.0	C	4,954	257	31.7	D
On-Ramp from Cantu-Galleano Ranch Rd	Weave	2	3,867	543	Weaving		4,697	518	Weaving	
Off-Ramp to SR-60 EB	Weave	1	4,410	924	Weaving		5,215	987	Weaving	
Off-Ramp to SR-60 WB	Diverge	1	3,486	831	13.8	B	4,228	1,023	18.1	B
On-Ramp from SR-60 WB	Merge	2	2,655	1,527	11.6	B	3,205	1,441	13.5	B
On-Ramp from SR-60 EB	Merge	2	4,182	1,681	14.3	B	4,646	2,012	18.5	B
Off-Ramp to Jurupa St	Diverge	1	5,863	507	25.5	C	6,659	341	25.9	C
On-Ramp from Jurupa St	Weave	1	5,356	597	Weaving		6,318	953	Weaving	
Off-Ramp to I-10 EB and WB	Weave	2	5,952	2,892	Weaving		7,271	3,050	Weaving	
On-Ramp from I-10 WB	Merge	1	3,060	857	20.4	C	4,221	814	23.7	C
On-Ramp from I-10 EB	Weave	2	3,917	1,472	Weaving		5,035	2,123	Weaving	
Off-Ramp to Fourth St	Weave	1	4,491	994	Weaving		5,965	768	Weaving	
On-Ramp from Fourth St	Merge	1	4,395	218	17.5	B	6,390	897	26.5	C
Off-Ramp to Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
On-Ramp from Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
Off-Ramp to Foothill Blvd	Diverge	2	4,613	1,043	9.3	A	7,287	1,575	18.8	B
Loop On-Ramp from Foothill Blvd	Merge	1	3,570	123	17.2	B	5,712	685	28.3	D
Direct On-Ramp from Foothill Blvd	Merge	1	3,693	156	17.6	B	6,397	233	26.7	C
Off-Ramp to Baseline Rd	Diverge	2	3,849	632	6.4	A	6,630	1,607	18.4	B
On-Ramp from Baseline Rd	Weave	1	3,217	439	Weaving		5,023	442	Weaving	
Off-Ramp to SR-210 EB	Weave	2	3,656	1,332	Weaving		6,084	1,922	Weaving	
Off-Ramp to SR-210 WB	Diverge	1	2,324	495	3.1	A	4,162	589	10.6	B
On-Ramp from SR-210 EB and WB	Weave	2	1,829	1,078	Weaving		3,573	1,526	Weaving	
Off-Ramp to Beech Ave/Summit Ave	Weave	1	2,907	386	Weaving		5,099	947	Weaving	
On-Ramp from Beech Ave/Summit Ave	Merge	1	2,521	266	14.7	B	4,152	493	21.7	C
Off-Ramp to Duncan Canyon Rd	Diverge	2	2,786	107	< 1.0	A	4,645	250	< 1.0	A
On-Ramp from Duncan Canyon Rd	Merge	1	2,679	62	13.7	B	4,395	66	19.3	B

Table 2-29. 2024 Build Alternative I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Southbound										
Off-Ramp to Duncan Canyon Rd	Diverge	1	5,488	50	25.3	C	3,856	77	19.1	B
On-Ramp from Duncan Canyon Rd	Merge	1	5,438	330	19.2	B	3,779	226	13.0	B
Off-Ramp to Beech Ave/Summit Ave	Diverge	1	4,441	309	22.5	C	3,055	245	16.9	B
On-Ramp from Beech Ave/Summit Ave	Weave	1	4,132	1,118	Weaving		2,810	454	Weaving	
Off-Ramp to SR-210 EB and WB	Weave	2	5,249	1,761	Weaving		3,264	1,366	Weaving	
On-Ramp from SR-210 WB	Merge	1	3,488	3,039	31.9	D	1,898	2,042	18.8	B
On-Ramp from SR-210 EB	Weave	1	6,527	1,097	Weaving		3,940	540	Weaving	
Off-Ramp to Baseline Rd	Weave	2	7,623	614	Weaving		4,480	459	Weaving	
Loop On-Ramp from Baseline Rd	Merge	1	7,009	798	25.5	C	4,021	548	17.5	B
Direct On-Ramp from Baseline Rd	Merge	1	7,807	399	28.7	D	4,569	307	17.4	B
Off-Ramp to Foothill Blvd	Diverge	1	7,175	968	28.7	D	4,098	627	14.8	B
Loop On-Ramp from Foothill Blvd	Merge	1	6,207	839	30.7	D	3,471	700	20.5	C
Direct On-Ramp from Foothill Blvd	Merge	1	7,046	1,201	36.3	E	4,171	1,190	26.7	C
Off-Ramp to Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
On-Ramp from Arrow Rte	N/A		Not Yet Constructed				Not Yet Constructed			
Off-Ramp to Fourth St	Diverge	1	8,247	1,002	34.4	D	5,362	781	25.3	C
On-Ramp from Fourth St	Weave	1	7,245	482	Weaving		4,581	1,372	Weaving	
Off-Ramp to I-10 EB	Weave	1	7,249	942	Weaving		5,953	762	Weaving	
Off-Ramp to I-10 WB	Diverge	2	6,307	1,909	21.2	C	5,191	1,417	18.2	B
On-Ramp from I-10 EB	Weave	1	4,398	1,582	Weaving		3,774	1,192	Weaving	
On-Ramp from I-10 WB	Weave	1	5,980	2,076	Weaving		4,966	1,544	Weaving	
Off-Ramp to Jurupa St	Weave	2	8,058	1,193	Weaving		6,511	518	Weaving	
On-Ramp from Jurupa St	Weave	1	6,865	384	Weaving		5,993	934	Weaving	
Off-Ramp to SR-60 EB and WB	Weave	2	7,249	3,918	Weaving		6,926	3,238	Weaving	
On-Ramp from SR-60 EB	Merge	1	3,331	1,459	31.9	D	3,688	1,284	31.9	D
On-Ramp from SR-60 WB	Merge	1	4,790	1,183	31.4	D	4,972	1,260	32.4	D
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	5,972	611	25.3	C	6,232	441	25.6	C
Loop On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	5,361	66	25.3	C	5,791	171	27.8	C
Direct On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	5,427	160	32.3	D	5,962	274	35.3	E
Source: I-15 CP Traffic Study Report, March 2017.										

Table 2-30. 2024 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours

Freeway Ramp	2024 No Build Alternative AM			2024 Build Alternative AM			2024 No Build Alternative PM			2024 Build Alternative PM		
	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS
I-15 Northbound												
Off-Ramp to Cantu-Galleano Ranch Rd	181	29.4	D	171	27.0	C	252	39.7	E	257	31.7	D
On-Ramp from Cantu-Galleano Ranch Rd	538	Weaving		543	Weaving		465	12.6	F	518	Weaving	
Off-Ramp to SR-60 EB	931	Weaving		924	Weaving		994	23.3	C	987	Weaving	
Off-Ramp to SR-60 WB	835	16.1	B	831	13.8	B	1,030	24.6	C	1,023	18.1	B
On-Ramp from SR-60 WB	1,524	13.9	B	1,527	11.6	B	1,004	17.2	B	1,441	13.5	B
On-Ramp from SR-60 EB	1,647	15.6	B	1,681	14.3	B	1,701	19.6	B	2,012	18.5	B
Off-Ramp to Jurupa St	505	30.8	D	507	25.5	C	355	34.2	D	341	25.9	C
On-Ramp from Jurupa St	596	Weaving		597	Weaving		920	Weaving		953	Weaving	
Off-Ramp to I-10 EB and WB	3,026	Weaving		2,892	Weaving		3,312	Weaving		3,050	Weaving	
On-Ramp from I-10 WB	852	21.4	C	857	20.4	C	672	24.0	C	814	23.7	C
On-Ramp from I-10 EB	1,460	Weaving		1,472	Weaving		1,953	Weaving		2,123	Weaving	
Off-Ramp to Fourth St	989	Weaving		994	Weaving		709	Weaving		768	Weaving	
On-Ramp from Fourth St	216	18.2	B	218	17.5	B	793	26.1	C	897	26.5	C
Off-Ramp to Arrow Rte	Not Yet Constructed			Not Yet Constructed			Not Yet Constructed			Not Yet Constructed		
On-Ramp from Arrow Rte	Not Yet Constructed			Not Yet Constructed			Not Yet Constructed			Not Yet Constructed		
Off-Ramp to Foothill Blvd	1,025	9.9	A	1,043	9.3	A	1,402	17.8	B	1,575	18.8	B
Loop On-Ramp from Foothill Blvd	130	18.3	B	123	17.2	B	758	29.7	D	685	28.3	D
Direct On-Ramp from Foothill Blvd	165	18.8	B	156	17.6	B	315	28.5	D	233	26.7	C
Off-Ramp to Baseline Rd	615	7.6	A	632	6.4	A	1,349	17.6	B	1,607	18.4	B
On-Ramp from Baseline Rd	446	Weaving		439	Weaving		570	Weaving		442	Weaving	
Off-Ramp to SR-210 EB	1,332	Weaving		1,332	Weaving		1,831	Weaving		1,922	Weaving	
Off-Ramp to SR-210 WB	480	4.5	A	495	3.1	A	335	10.4	B	589	10.6	B
On-Ramp from SR-210 EB and WB	1,074	Weaving		1,078	Weaving		1,623	Weaving		1,526	Weaving	
Off-Ramp to Beech Ave/Summit Ave	376	Weaving		386	Weaving		823	Weaving		947	Weaving	
On-Ramp from Beech Ave/Summit Ave	266	16.0	B	266	14.7	B	519	24.4	C	493	21.7	C
Off-Ramp to Duncan Canyon Rd	107	< 1.0	A	107	< 1.0	A	236	1.3	A	250	< 1.0	A
On-Ramp from Duncan Canyon Rd	63	14.9	B	62	13.7	B	108	22.1	C	66	19.3	B

Table 2-30. 2024 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours (continued)

Freeway Ramp	2024 No Build Alternative AM			2024 Build Alternative AM			2024 No Build Alternative PM			2024 Build Alternative PM		
	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS
I-15 Southbound												
Off-Ramp to Duncan Canyon Rd	50	24.8	C	50	25.3	C	79	18.9	B	77	19.1	B
On-Ramp from Duncan Canyon Rd	313	18.6	B	330	19.2	B	212	12.7	B	226	13.0	B
Off-Ramp to Beech Ave/Summit Ave	329	27.2	C	309	22.5	C	247	20.4	C	245	16.9	B
On-Ramp from Beech Ave/Summit Ave	1,090	Weaving		1,118	Weaving		426	Weaving		454	Weaving	
Off-Ramp to SR-210 EB and WB	1,851	Weaving		1,761	Weaving		1,356	Weaving		1,366	Weaving	
On-Ramp from SR-210 WB	2,897	34.3	D	3,039	31.9	D	1,911	20.7	C	2,042	18.8	B
On-Ramp from SR-210 EB	978	Weaving		1,097	Weaving		469	Weaving		540	Weaving	
Off-Ramp to Baseline Rd	631	Weaving		614	Weaving		476	Weaving		459	Weaving	
Loop On-Ramp from Baseline Rd	713	26.7	C	798	25.5	C	513	18.8	B	548	17.5	B
Direct On-Ramp from Baseline Rd	341	31.6	F	399	28.7	D	205	18.6	B	307	17.4	B
Off-Ramp to Foothill Blvd	1,044	35.7	F	968	28.7	D	643	19.9	B	627	14.8	B
Loop On-Ramp from Foothill Blvd	591	34.0	D	839	30.7	D	596	23.9	C	700	20.5	C
Direct On-Ramp from Foothill Blvd	1,043	39.9	F	1,201	36.3	E	1,124	30.0	D	1,190	26.7	C
Off-Ramp to Arrow Rte	Not Yet Constructed			Not Yet Constructed			Not Yet Constructed			Not Yet Constructed		
On-Ramp from Arrow Rte	Not Yet Constructed			Not Yet Constructed			Not Yet Constructed			Not Yet Constructed		
Off-Ramp to Fourth St	913	37.7	E	1,002	34.4	D	775	27.7	C	781	25.3	C
On-Ramp from Fourth St	514	Weaving		482	Weaving		1,343	Weaving		1,372	Weaving	
Off-Ramp to I-10 EB	799	Weaving		942	Weaving		793	Weaving		762	Weaving	
Off-Ramp to I-10 WB	2,143	29.0	D	1,909	21.2	C	1,424	23.1	C	1,417	18.2	B
On-Ramp from I-10 EB	1,802	Weaving		1,582	Weaving		1,408	Weaving		1,192	Weaving	
On-Ramp from I-10 WB	2,087	Weaving		2,076	Weaving		1,507	Weaving		1,544	Weaving	
Off-Ramp to Jurupa St	1,136	Weaving		1,193	Weaving		543	Weaving		518	Weaving	
On-Ramp from Jurupa St	397	Weaving		384	Weaving		901	Weaving		934	Weaving	
Off-Ramp to SR-60 EB and WB	3,631	Weaving		3,918	Weaving		3,073	Weaving		3,238	Weaving	
On-Ramp from SR-60 EB	1,490	43.5	F	1,459	31.9	D	1,479	39.8	E	1,284	31.9	D
On-Ramp from SR-60 WB	1,210	45.7	F	1,183	31.4	D	1,309	40.4	F	1,260	32.4	D
Off-Ramp to Cantu-Galleano Ranch Rd	570	45.4	F	611	25.3	C	418	39.9	F	441	25.6	C
Loop On-Ramp from Cantu-Galleano Ranch Rd	66	41.4	F	66	25.3	C	175	38.6	F	171	27.8	C
Direct On-Ramp from Cantu-Galleano Ranch Rd	167	50.2	F	160	32.3	D	268	48.3	F	274	35.3	E

The off-ramp queuing analysis in the No Build and Build conditions are shown in **Table 2-31**. The table indicates that none of the queues during the AM and PM peak hours for the No Build and Build Alternatives were found to exceed the storage capacity of the off-ramps.

Table 2-31. Off-Ramp Queuing Analysis – 2024 No Build and Build Alternatives

Freeway Ramp	Storage (ft)	No Build		Build	
		Queue ¹ (ft) AM Peak Hour	Queue ¹ (ft) PM Peak Hour	Queue ¹ (ft) AM Peak Hour	Queue ¹ (ft) PM Peak Hour
I-15 Northbound					
Off-Ramp to Cantu-Galleano Ranch Rd	1,625	45	85	45	90
Off-Ramp to Jurupa St	1,275	213	110	217	110
Off-Ramp to Fourth St	1,250	266	295	272	284
Off-Ramp to Arrow Rte		Not Yet Constructed		Not Yet Constructed	
Off-Ramp to Foothill Blvd	1,700	382	418	386	530
Off-Ramp to Baseline Rd	1,540	267	397	273	537
Off-Ramp to Beech Ave/Summit Ave	1,160	154	376	154	477
Off-Ramp to Duncan Canyon Rd	2,050	41	91	41	91
I-15 Southbound					
Off-Ramp to Duncan Canyon Rd	2,250	16	18	16	18
Off-Ramp to Beech Ave/Summit Ave	2,050	267	217	241	217
Off-Ramp to Baseline Rd	1,750	221	168	217	165
Loop On-Ramp from Foothill Blvd	1,740	389	337	354	336
Off-Ramp to Arrow Rte		Not Yet Constructed		Not Yet Constructed	
Off-Ramp to Fourth St	1,625	153	274	186	274
Off-Ramp to Jurupa St	1,750	395	173	409	165
Off-Ramp to Cantu-Galleano Ranch Rd	1,440	118	113	115	108

¹ Queue indicates Synchro 95th percentile queue length (ft) for the turning movement with the longest queue.
Source: *I-15 CP Traffic Study Report*, March 2017.

The on-ramp metering analysis is shown in **Table 2-32** for the No Build conditions. The recommended storage length is exceeded in the AM peak hour at two locations and in the PM peak hour at four locations. These are the same locations where the recommended storage length is not provided under existing conditions.

Table 2-33 provides the on-ramp metering analysis for the Build Alternative. The recommended storage length is exceeded in the AM peak hour at one locations and at four locations in the PM peak hour. The NB on-ramp from Jurupa Street would have shorter queues with the project than without the project condition due to a redistribution of trips arising from the project. The project would include metering of the NB loop on-ramp from Foothill Boulevard in accordance with the Caltrans policy that requires meters be added whenever ramps in urban areas are modified. However, traffic density in the influence area where the on-ramp traffic merges with mainline traffic would be lower with the project than without it.

Table 2-32. On-Ramp Metering Analysis – 2024 No Build Alternative

Freeway Ramp	Number of Lanes		Storage Length (ft)	AM Peak Hour				PM Peak Hour			
				PCEs in Metered Lanes		Minimum Storage (ft) ¹		PCEs in Metered Lanes		Minimum Storage (ft) ¹	
	GP	HOV ²		GP	HOV ²	GP	HOV ²	GP	HOV ²	GP	HOV ²
NB On-Ramp from Jurupa St	2	0	930	729	-	740	-	1,004	-	1,019	-
NB On-Ramp from Fourth St	2	0	1,275	244	-	248	-	813	-	825	-
NB Loop On-Ramp from Foothill Blvd	Not Metered			141	-	Not Metered		773	Not Metered		-
NB Direct On-Ramp from Foothill Blvd	Not Metered			211	-	Not Metered		327	Not Metered		-
SB Loop On-Ramp from Foothill Blvd	1	0	1,030	640	-	1,298	-	627	-	1,272	-
SB Direct On-Ramp from Foothill Blvd	2	0	1,150	1,066	-	1,081	-	1,133	-	1,149	-
SB Loop On-Ramp from Fourth St	2	0	725	623	-	632	-	1,385	-	1,406	-
SB On-Ramp from Jurupa St	2	0	1,165	562	-	570	-	984	-	999	-
¹ Minimum Storage is the minimum storage length recommended in the Highway Design Manual based on 7% of peak hour demand per lane in pcphpl. Average vehicle spacing is assumed to be 29 ft. ² HOV preferential lanes may be metered or operated as un-metered HOV bypass lanes Source: I-15 CP Traffic Study Report, March 2017.											

Table 2-33. On-Ramp Metering Analysis – 2024 Build Alternative

Freeway Ramp	Number of Lanes		Storage Length (ft)	AM Peak Hour				PM Peak Hour			
				PCEs in Metered Lanes		Minimum Storage (ft) ¹		PCEs in Metered Lanes		Minimum Storage (ft) ¹	
	GP	HOV ²		GP	HOV ²	GP	HOV ²	GP	HOV ²	GP	HOV ²
NB On-Ramp from Jurupa St	2	1	930	508	150	516	305	720	258	731	524
NB On-Ramp from Fourth St	2	1	1,275	162	74	164	151	655	250	665	508
NB Loop On-Ramp from Foothill Blvd	1	0	1,220	126	-	256	-	686	-	1,394	-
NB Direct On-Ramp from Foothill Blvd	2	1	720	121	41	123	84	185	52	188	106
SB Loop On-Ramp from Foothill Blvd	1	0	1,030	848	-	1,721	-	717	-	1,456	-
SB Direct On-Ramp from Foothill Blvd	2	1	1,150	928	287	942	582	788	410	800	832
SB Loop On-Ramp from Fourth St	2	0	725	534	-	542	-	1,386	-	1,407	-
SB On-Ramp from Jurupa St	2	1	1,165	366	87	372	176	661	303	671	616
¹ Minimum Storage is the minimum storage length recommended in the Highway Design Manual based on 7% of peak hour demand per lane in pcphpl. Average vehicle spacing is assumed to be 29 ft. ² HOV preferential lanes may be metered or operated as un-metered HOV bypass lanes. Source: I-15 CP Traffic Study Report, March 2017.											

Average Speed and Vehicle-Hours of Delay

The daily average speed for vehicles traveling on I-15 in the study corridor is forecast to be 58.4 mph, compared to 53.6 mph under 2024 No Build conditions. The analysis indicates that without the project, speeds within the project area would be below 40 mph for some sections of the corridor during peak hours, and below 20 mph within a few sections. With the project, speeds in the GP lanes would be considerably higher, more than 50 mph, nearly within the entire limits of the project area. In addition, drivers would have the option to use the Express Lanes and travel at speed higher than 60 mph.

The SBTAM model that was used to calculate the total VHD has four analysis periods, namely a three-hour AM peak period, a four-hour PM peak period, a mid-day off-peak period, and an evening/night period. **Table 2-34** shows the total vehicle hours of delay in the sub-region used for the VHD analysis. Data indicates that there are fewer total VHD in 2024 under the Build Alternative than under the No Build Alternative. This demonstrates the overall beneficial effect of the I-15 Express Lanes within the analysis area.

Table 2-34. 2024 No Build and Build Alternative Vehicle Hours of Delay in the Analysis Area

Analysis Period	Existing (2014)	2024		
		No Build Alternative	Build Alternative	Effect of Project
AM 3-hr Peak	5,367,271	3,790,870	3,745,704	-45,166
PM 4-hr Peak	10,943,656	8,861,967	8,580,233	-281,734
Mid-day 3-hours	3,789,829	3,440,691	3,431,712	-8,979
Night 14 hours	472,211	479,248	479,909	661
Daily	20,572,967	16,572,776	16,237,558	-335,219
Source: I-15 CP Traffic Study Report, March 2017.				

Table 2-35 and **Table 2-36** present the No Build Alternative and Build Alternative projected speeds for the various mainline segments within the project area. The speeds in these tables are from microsimulation of future traffic flows. The information presented in the tables indicated a significant improvement of speed in the GP lanes in the AM and PM hours with the Build Alternative of the project.

Table 2-35. Forecast Speed by Section in 2024, AM Peak Hour

I-15 NB Mainline Segment south of	2024 No Build	2024 Build Alternative		Color Code
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)	
Cantu Galleano Ranch Rd. (Off)	63	65	65	0 to 20 MPH
Cantu Galleano Ranch Rd. (On)	63	64	64	
SR 60 EB (Off)	58	62	64	
SR 60 WB (Off)	55	63	64	
SR 60 WB (On)	58	64	64	
SR 60 EB (On)	51	57	64	20 to 30 MPH
E Jurupa St (Off)	28	55	64	
E Jurupa St (On)	49	59	65	
I-10 (Off)	54	59	65	
I-10 WB (On)	57	64	65	
I-10 EB (On)	48	52	65	30 to 40 MPH
4th St (Off)	58	58	65	
4th St (On)	59	62	65	
E Foothill Blvd. (Off)	58	62	65	
E Foothill Blvd. EB (On)	62	63	65	
E Foothill Blvd. WB (On)	62	63	65	40 to 55 MPH
Baseline Ave (Off)	62	63	65	
Baseline Ave (On)	62	64	65	
I-210 EB (Off)	63	64	64	
I-210 WB (Off)	63	63	64	
I-210 (On)	63	63	64	>55 MPH
Beech Ave (Off)	62	61	64	
Beech Ave (On)	62	61	64	
Duncan Canyon (Off)	62	61	64	
Duncan Canyon (On)	61	60	64	
I-15 NB Mainline North Limit	61	63	64	

I-15 SB Mainline Segment north of	2024 No Build	2024 Build Alternative		Color Code
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)	
Duncan Canyon (Off)	63	64	-	0 to 20 MPH
Duncan Canyon (On)	62	64	-	
Beech Ave (Off)	61	64	64	
Beech Ave (On)	62	64	63	
I-210 EB (Off)	62	64	63	
I-210 WB (Off)	55	62	63	20 to 30 MPH
I-210 WB (On)	60	65	63	
I-210 EB (On)	17	48	63	
Baseline Ave (Off)	16	59	63	
Baseline Ave (On)	19	63	65	
Baseline Ave EB (On)	21	61	64	30 to 40 MPH
E Foothill Blvd. (Off)	37	51	64	
E Foothill Blvd. WB (On)	28	49	64	
E Foothill Blvd. EB (On)	32	37	64	
4th St (Off)	57	55	64	40 to 55 MPH
4th St (On)	60	55	64	
I-10 EB (Off)	60	59	64	
I-10 WB (Off)	58	61	64	
I-10 EB (On)	39	64	64	
I-10 WB (On)	17	63	64	>55 MPH
E Jurupa St (Off)	37	59	64	
E Jurupa St (On)	36	49	63	
SR 60 (Off)	50	59	64	
SR 60 EB (On)	28	63	64	
SR 60 WB (On)	27	57	64	
Cantu Galleano Ranch Rd. (Off)	31	45	64	
Cantu Galleano Ranch Rd. WB (On)	47	54	64	
Cantu Galleano Ranch Rd. EB (On)	60	57	63	
I-15 SB Mainline South Limit	30	31	63	

Source: I-15 CP Traffic Study Report, March 2017.

Table 2-36. Forecast Speed by Section in 2024, PM Peak Hour

I-15 NB Mainline Segment south of	2024 No Build	2024 Build Alternative	
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)
Cantu Galleano Ranch Rd. (Off)	47	62	64
Cantu Galleano Ranch Rd. (On)	46	61	61
SR 60 EB (Off)	29	62	64
SR 60 WB (Off)	13	50	64
SR 60 WB (On)	22	58	64
SR 60 EB (On)	34	55	64
E Jurupa St (Off)	30	61	64
E Jurupa St (On)	46	60	65
I-10 (Off)	56	57	64
I-10 WB (On)	62	63	64
I-10 EB (On)	52	58	64
4th St (Off)	51	57	64
4th St (On)	29	59	64
E Foothill Blvd. (Off)	53	56	64
E Foothill Blvd. EB (On)	61	61	64
E Foothill Blvd. WB (On)	59	59	64
Baseline Ave (Off)	53	61	64
Baseline Ave (On)	60	62	62
I-210 EB (Off)	63	62	62
I-210 WB (Off)	63	62	62
I-210 (On)	64	63	62
Beech Ave (Off)	58	60	62
Beech Ave (On)	56	61	62
Duncan Canyon (Off)	52	61	63
Duncan Canyon (On)	58	60	63
I-15 NB Mainline North Limit	62	61	63

I-15 SB Mainline Segment north of	2024 No Build	2024 Build Alternative	
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)
Duncan Canyon (Off)	63	63	-
Duncan Canyon (On)	62	62	-
Beech Ave (Off)	62	62	65
Beech Ave (On)	62	62	64
I-210 EB (Off)	62	62	64
I-210 WB (Off)	61	61	64
I-210 WB (On)	63	64	64
I-210 EB (On)	54	53	64
Baseline Ave (Off)	62	62	64
Baseline Ave (On)	62	62	64
Baseline Ave EB (On)	59	62	64
E Foothill Blvd. (Off)	62	63	64
E Foothill Blvd. WB (On)	62	63	64
E Foothill Blvd. EB (On)	61	62	64
4th St (Off)	61	62	64
4th St (On)	61	62	64
I-10 EB (Off)	59	62	64
I-10 WB (Off)	50	62	64
I-10 EB (On)	29	64	64
I-10 WB (On)	12	63	64
E Jurupa St (Off)	13	63	64
E Jurupa St (On)	15	63	64
SR 60 (Off)	25	59	64
SR 60 EB (On)	14	62	64
SR 60 WB (On)	15	59	64
Cantu Galleano Ranch Rd. (Off)	15	62	64
Cantu Galleano Ranch Rd. WB (On)	20	55	64
Cantu Galleano Ranch Rd. EB (On)	15	52	54
I-15 SB Mainline South Limit	25	30	52

Color Code**Color Code**

Source: I-15 CP Traffic Study Report, March 2017.

Intersections

The proposed opening year (2024) LOS at study intersections for the No Build and Build Alternatives is shown in **Table 2-37**. All study area intersections operate at an acceptable LOS under the conditions for the 2024 No Build and 2024 Build Alternatives during the AM and PM peak hours.

Table 2-37. 2024 No Build and Build Alternatives Intersections LOS Analysis

Intersection	Jurisdiction	LOS Target	AM Peak Hour				PM Peak Hour			
			No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS
Cherry Ave/Wilson Ave/Beech Ave	Fontana	C	29.2	C	28.7	C	25.3	C	24.9	C
I-15 SB Ramps/Beech Ave	Caltrans	D	30.1	C	30.8	C	11.4	B	11.2	B
I-15 NB Ramps/Beech Ave	Caltrans	D	14.6	B	14.9	B	20.0	B	31.0	C
Falcon Ridge/Summit Heights Gateway/Beech Ave	Fontana	C	26.2	C	26.7	C	29.4	C	28.2	C
Pecan Ave/Shelby Pl/Baseline Rd	Rancho Cucamonga	D	18.2	B	18.8	B	16.0	B	16.0	B
I-15 SB Ramps/Baseline Rd	Caltrans	D	21.6	C	17.9	B	11.6	B	10.6	B
East Ave/Baseline Rd	Rancho Cucamonga	D	32.1	C	32.1	C	42.5	D	40.4	C
I-15 NB Ramps/Baseline Rd	Caltrans	D	31.8	C	32.3	C	27.3	C	27.9	C
American Way/Baseline Rd	Fontana	C	20.0	C	19.8	B	15.3	B	15.0	C
Day Creek Blvd/E. Foothill Blvd	Rancho Cucamonga	D	21.9	C	22.4	C	45.5	D	45.5	D
I-15 SB Ramps/E. Foothill Blvd	Caltrans	D	37.5	D	28.4	C	12.3	B	12.3	B
I-15 NB Ramps/E. Foothill Blvd	Caltrans	D	18.6	B	17.5	B	19.2	B	23.9	C
Marketplace/E. Foothill Blvd	Rancho Cucamonga	D	25.5	C	27.5	C	40.0	D	40.1	D
Buffalo Ave/Franklin Ave/E. Fourth St	Ontario	D	27.3	C	27.0	C	43.4	D	43.2	D
I-15 SB Ramps/E. Fourth St	Caltrans	D	30.7	C	40.0	D	44.6	D	45.6	D
I-15 NB Ramps/E. Fourth St	Caltrans	D	39.9	D	40.0	D	45.3	D	47.4	D
Santa Anita/Wineville Ave/E. Fourth St	Ontario	D	30.2	C	29.2	C	31.2	C	31.7	C
S. Rockefeller Ave/Toyota Way/E. Jurupa St	Ontario	D	26.1	C	26.4	C	28.5	C	26.3	C
I-15 SB Ramps/E. Jurupa St	Caltrans	D	29.7	C	30.0	C	17.5	B	17.5	B
I-15 NB Ramps/E. Jurupa St	Caltrans	D	16.9	B	16.8	B	30.6	C	32.2	C
Auto Center Dr/E. Jurupa St	Ontario	D	29.1	C	29.0	C	38.2	D	37.0	D
Hamner Ave/Milliken Ave/Cantu-Galleano Ranch Rd	Eastvale	D	20.6	C	21.8	C	15.5	B	17.6	B
I-15 SB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	19.8	B	20.1	C	18.3	B	17.8	B

Table 2-37. 2024 No Build and Build Alternatives Intersections LOS Analysis (continued)

Intersection	Jurisdiction	LOS Target	AM Peak Hour				PM Peak Hour			
			No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS
I-15 NB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	15.9	B	15.6	B	17.5	B	17.9	B
Wineville Ave/Cantu-Galleano Ranch Rd	Jurupa Valley	D	26.6	C	26.6	C	19.5	B	19.9	B
I-15 SB Ramps/Duncan Canyon Rd	Caltrans	D	16.2	B	16.9	B	14.5	B	14.9	B
I-15 NB Ramps/Duncan Canyon Rd	Caltrans	D	16.4	B	16.4	B	15.4	B	15.3	B
Source: I-15 CP Traffic Study Report, March 2017.										

Horizon Year (2045) Traffic Conditions

Mainline Volumes and Level of Service

The horizon year (2045) mainline LOS analysis for the No Build Alternative are shown in **Table 2-38**. In the AM peak hour, I-15 is at LOS below D in the SB direction between Duncan Canyon Road and Cantu-Galleano Ranch Road, and in the NB between Cantu-Galleano Ranch Road and I-10 (i.e., the south portion of the corridor). In the PM peak hour, the conditions are reversed, with nearly the entire corridor operating at an unacceptable LOS in the NB direction. In the SB direction, unacceptable LOS would occur in the southern portion of the project limits.

The horizon year (2045) Build Alternative freeway volumes and LOS are shown in **Table 2-39**. Under the Build Alternative, there would be widespread capacity problems in the GP lanes, especially SB in the AM peak hour and NB in the PM peak hour, similar to the No Build Alternative.

Table 2-40 compares the Build Alternative LOS shown for GP lanes in the Build Alternative condition to the LOS for the No Build Alternative condition. The comparison shows that although the project would improve conditions in the GP lanes in most segments of the study corridor, it would slightly worsen traffic density on the SB mainline segments between Arrow Route and Fourth Street and between Fourth Street and I-10. In both cases, the LOS in the No Build Alternative condition is worse than the target LOS of D and the project would slightly increase traffic density³. The project draws additional car traffic to I-15 because the overall traffic conditions are better with the Express Lanes than without them, notwithstanding the fact that density is slightly worse in a few locations due to improved overall travel conditions. In addition, in some sections, such as SB Fourth Street to I-10, the Build Alternative volume is lower, but the average delay is worse. This results from a higher percentage of weaving vehicles in the Build Alternative.

³ The Build Alternative traffic volume is lower than the No Build Alternative volume for Segment 15, but the computed density is higher because there is more weaving traffic.

Table 2-38. 2045 No Build Alternative I-15 Mainline Traffic Volumes, Densities, and LOS

Freeway Segment	Analysis Type	# of Lanes	AM Peak Hour			PM Peak Hour		
			Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound								
Cantu-Galleano Ranch Rd to SR-60	Weaving*	4+Aux	7,244	36.5	E	8,194	28.0	D
SR-60 to Jurupa St	Basic	4	7,956	37.3	E	8,210	40.6	E
Jurupa St to I-10	Weaving	4+Aux	7,979	>Capacity	F	8,738	>Capacity	F
I-10 to Fourth St	Weaving	5+Aux	7,726	31.3	D	7,849	29.4	D
Fourth St to Arrow Rte	Basic	4	6,958	31.0	D	7,967	38.0	E
Arrow Rte to Foothill Blvd	Basic	4	6,317	27.4	D	7,952	37.5	E
Foothill Blvd to Baseline Rd	Basic	4	5,504	23.5	C	8,019	38.1	E
Baseline Rd to SR-210	Weaving	4+Aux	5,334	23.9	C	8,190	>Capacity	F
SR-210 to Summit Ave	Weaving	4+Aux	4,765	22.8	C	7,193	>Capacity	F
Summit Ave to Duncan Canyon Rd	Basic	4	4,640	20.4	C	6,754	30.1	D
Duncan Canyon Rd to Sierra Ave	Basic	4	4,445	19.6	C	6,794	30.4	D
I-15 Southbound								
Sierra Ave to Duncan Canyon Rd	Basic	4	7,538	34.8	D	4,870	21.3	C
Duncan Canyon Rd to Summit Ave	Basic	4	7,765	36.6	E	5,104	22.2	C
Summit Ave to SR-210	Weaving	4+Aux	8,348	>Capacity	F	5,301	25.0	C
SR-210 to Baseline Rd	Weaving	4+Aux	9,697	48.3	F	5,903	24.2	C
Baseline Rd to Foothill Blvd	Basic	4	9,685	61.0	F	6,103	26.6	D
Foothill Blvd to Arrow Rte	Basic	4	10,191	71.4	F	6,859	30.8	D
Arrow Rte to Fourth St	Basic	4	9,834	64.0	F	7,711	36.8	E
Fourth St to I-10	Weaving	5+Aux	9,622	36.8	E	8,382	34.0	D
I-10 to Jurupa St	Weaving	4+Aux	11,223	>Capacity	F	8,856	>Capacity	F
Jurupa St to SR-60	Weaving	3+Aux	10,442	>Capacity	F	9,197	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	Basic	4	10,221	69.7	F	9,502	58.4	F
Note: NB I-15 from Cantu-Galleano Ranch Rd to SR-60 operates as a basic section in the PM peak hour Source: I-15 CP Traffic Study Report, March 2017.								

Table 2-41 shows the LOS for the Express Lanes access points and compares them to the LOS at the same locations for the No Build Alternative. Under No Build conditions, LOS deficiencies would occur at six locations in the AM peak hour and at six locations in the PM peak hour, compared with three locations in the AM and four in the PM under Build Alternative condition. Further study of those locations using micro-simulation shows that the LOS at the access points under the Build Alternative conditions would in fact be adequate, and that the apparent

Table 2-39. 2045 Build Alternative I-15 Freeway Volumes, Densities, and LOS

Freeway Segment	Analysis Type	# of Lanes	AM Peak Hour						PM Peak Hour					
			General Purpose Lanes			Express Lanes			General Purpose Lanes			Express Lanes		
			Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound														
Cantu-Galleano Ranch Rd to SR-60	Weaving	4+Aux	6,675	32.8	D	1,010	8.2	A	7,170	34.7	D	2,167	17.6	B
SR-60 to Jurupa St	Basic	5	7,863	26.8	D	1,010	8.2	A	8,429	29.7	D	2,167	17.6	B
Jurupa St to I-10	Weaving	5+Aux	7,399	>Capacity	F	1,466	11.9	B	8,271	>Capacity	F	2,893	23.5	C
I-10 to Fourth St	Weaving	5+Aux	7,190	29.4	D	1,358	11.0	A	8,020	30.7	D	2,465	20.0	C
Fourth St to Arrow Rte	Basic	5	6,387	21.7	C	1,358	11.0	A	8,216	28.5	D	2,465	20.0	C
Arrow Rte to Foothill Blvd	Weaving	5+Aux	5,693	22.7	C	1,358	11.0	A	7,843	33.7	D	2,839	23.0	C
Foothill Blvd to Baseline Rd	Basic	4	4,804	20.7	C	1,358	11.0	A	7,539	34.8	D	2,839	23.0	C
Baseline Rd to SR-210	Weaving	4+Aux	4,637	20.8	C	1,223	9.9	A	7,268	>Capacity	F	2,640	21.4	C
SR-210 to Summit Ave	Weaving	4+Aux	3,811	17.9	B	1,223	9.9	A	5,924	>Capacity	F	2,640	21.4	C
Summit Ave to Duncan Canyon Rd	Basic	4	3,659	16.6	B	1,223	9.9	A	5,544	24.2	C	2,640	21.4	C
Duncan Canyon Rd to Sierra Ave	Basic	4	3,487	15.9	B	1,223	9.9	A	5,370	23.3	C	2,640	21.4	C
I-15 Southbound														
Sierra Ave to Duncan Canyon Rd	Basic	4	5,091	22.2	C	3,066	25.1	C	3,141	14.3	B	2,560	20.7	C
Duncan Canyon Rd to Summit Ave	Basic	4	5,422	23.6	C	3,066	25.1	C	3,362	15.2	B	2,560	20.7	C
Beech/Summit Ave to SR-210	Weaving	4+Aux	6,167	>Capacity	F	3,066	25.1	C	3,646	16.5	B	2,560	20.7	C
SR-210 to Baseline Rd	Weaving	4+Aux	8,423	42.2	E	3,066	25.1	C	4,891	20.4	C	2,560	20.7	C
Baseline Rd to Foothill Blvd	Basic	4	8,719	47.6	F	3,300	27.4	D	5,054	21.9	C	2,872	23.3	C
Foothill Blvd to Arrow Rte	Basic	4	9,626	61.6	F	3,300	27.4	D	6,350	27.9	D	2,872	23.3	C
Arrow Rte to Fourth St	Basic	4	9,919	68.2	F	3,068	25.1	C	7,338	34.1	D	3,072	25.1	C
Fourth St to I-10	Weaving	5+Aux	9,560	39.9	E	3,068	25.1	C	8,009	34.3	D	3,072	25.1	C
I-10 to Jurupa St	Weaving	5+Aux	10,621	>Capacity	F	2,826	22.9	C	8,703	>Capacity	F	2,983	24.3	C
Jurupa St to SR-60	Weaving	4+Aux	9,844	>Capacity	F	2,895	23.5	C	8,851	>Capacity	F	3,300	27.4	D
SR-60 to Cantu-Galleano Ranch Rd	Basic	4	8,351	41.2	E	2,895	23.5	C	8,254	41.0	E	3,300	27.4	D
Source: I-15 CP Traffic Study Report, March 2017.														

Table 2-40. 2045 Freeway Mainline No Build and Build Alternatives LOS – AM and PM Peak Hours

Freeway Segment	No Build Alternative AM			Build Alternative AM			No Build Alternative PM			Build Alternative PM		
	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound												
Cantu-Galleano Ranch Rd to SR-60	7,244	36.5	E	6,675	32.8	D	8,194	28.0	D	7,170	34.7	D
SR-60 to Jurupa St	7,956	37.3	E	7,863	26.8	D	8,210	40.6	E	8,429	29.7	D
Jurupa St to I-10	7,979	>Capacity	F	7,399	>Capacity	F	8,738	>Capacity	F	8,271	>Capacity	F
I-10 to Fourth St	7,726	31.3	D	7,190	29.4	D	7,849	29.4	D	8,020	30.7	D
Fourth St to Arrow Rte	6,958	31.0	D	6,387	21.7	C	7,967	38.0	E	8,216	28.5	D
Arrow Rte to Foothill Blvd	6,317	27.4	D	5,693	22.7	C	7,952	37.5	E	7,843	33.7	D
Foothill Blvd to Baseline Rd	5,504	23.5	C	4,804	20.7	C	8,019	38.1	E	7,539	34.8	D
Baseline Rd to SR-210	5,334	23.9	C	4,637	20.8	C	8,190	>Capacity	F	7,268	>Capacity	F
SR-210 to Summit Ave	4,765	22.8	C	3,811	17.9	B	7,193	>Capacity	F	5,924	>Capacity	F
Summit Ave to Duncan Canyon Rd	4,640	20.4	C	3,659	16.6	B	6,754	30.1	D	5,544	24.2	C
Duncan Canyon Rd to Sierra Ave	4,445	19.6	C	3,487	15.9	B	6,794	30.4	D	5,370	23.3	C
I-15 Southbound												
Sierra Ave to Duncan Canyon Rd	7,538	34.8	D	5,091	22.2	C	4,870	21.3	C	3,141	14.3	B
Duncan Canyon Rd to Summit Ave	7,765	36.6	E	5,422	23.6	C	5,104	22.2	C	3,362	15.2	B
Summit Ave to SR-210	8,348	>Capacity	F	6,167	>Capacity	F	5,301	25.0	C	3,646	16.5	B
SR-210 to Baseline Rd	9,697	48.3	F	8,423	42.2	E	5,903	24.2	C	4,891	20.4	C
Baseline Rd to Foothill Blvd	9,685	61.0	F	8,719	47.6	F	6,103	26.6	D	5,054	21.9	C
Foothill Blvd to Arrow Rte	10,191	71.4	F	9,626	61.6	F	6,859	30.8	D	6,350	27.9	D
Arrow Rte to Fourth St	9,834	64.0	F	9,919	68.2	F	7,711	36.8	E	7,338	34.1	D
Fourth St to I-10	9,622	36.8	E	9,560	39.9	E	8,382	34.0	D	8,009	34.3	D
I-10 to Jurupa St	11,223	>Capacity	F	10,621	>Capacity	F	8,856	>Capacity	F	8,703	>Capacity	F
Jurupa St to SR-60	10,442	>Capacity	F	9,844	>Capacity	F	9,197	>Capacity	F	8,851	>Capacity	F
SR-60 to Cantu-Galleano Ranch Rd	10,221	69.7	F	8,351	41.2	E	9,502	58.4	F	8,254	41.0	E
Source: I-15 CP Traffic Study Report, March 2017.												

Table 2-41. 2045 Build Alternative Express Lanes Access Points Volumes and LOS

Freeway Segment Access Point	Analysis Type		# of Lanes		2045 No Build Alternative						2045 Build Alternative					
					AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	No Build	Build	No Build	Build	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS	Volume	Density	LOS
I-15 Northbound																
Cantu-Galleano Ranch Rd	Basic	Weaving	3	3+2EL	6,497	45.9	F	7,269	59.3	F	6,898	31.6	D	8,193	38.6	E
Jurupa St	Basic	Basic	4	5+2EL	7,338	33.1	D	7,743	36.4	E	8,249	17.3	B	10,085	21.0	C
Arrow Rte	Basic	Basic	4	5+2EL	6,958	31.0	D	7,967	38.0	E	7,745	16.5	B	10,681	22.2	C
Baseline Rd	Basic	Weaving	4	4+2EL	4,797	20.8	C	6,949	30.5	D	5,331	17.8	B	8,842	31.0	D
Beach-Duncan Rd	Basic	Weaving	4	4+2EL	4,640	20.4	C	6,754	30.1	D	4,611	17.6	B	7,767	17.6	B
I-15 Southbound																
Beach-Duncan Rd	Basic	Basic	4	4+2EL	7,765	36.6	E	5,104	22.2	C	8,487	24.3	C	5,922	17.1	B
Baseline Rd	Basic	Weaving	4	4+2EL	8,517	44.7	E	5,290	22.7	C	10,571	56.3	F	6,887	56.3	F
Arrow Rte	Basic	Weaving	4	4+2EL	9,834	64.0	F	7,711	36.8	E	12,986	34.2	D	10,410	25.2	C
Jurupa St	Basic	Weaving	4	5+2EL	10,001	71.5	F	8,221	41.1	E	12,134	>Capacity	F	11,101	>Capacity	F
Cantu-Galleano Ranch Rd	Basic	Weaving	3	3+2EL	9,412	370.9	F	8,900	196.0	F	10,273	>Capacity	F	10,806	>Capacity	F
Source: I-15 CP Traffic Study Report, March 2017.																

LOS deficiency arises from the fact that the HCM method has limitations when applied to express lane access points.

Dynamic pricing would be used to ensure that the Express Lanes do not exceed 1,650 vehicles/lane/hour (the threshold between LOS C and D) at the highest-volume section of the Express Lanes. With two Express Lanes, the maximum allowable Express Lanes volume is 3,300 vehicles.

Freeway Ramps

The horizon year (2045) No Build Alternative traffic volumes and LOS on study ramps are shown in **Table 2-42**. Capacity problems would occur on many I-15 ramps, particularly in the southern portions of the corridor. The horizon year (2045) for Build Alternative traffic volumes and LOS study ramps are shown in **Table 2-43**. **Table 2-44** compares the Build Alternative LOS with the No Build Alternative conditions. The comparison shows that the project improves overall LOS and traffic density on ramps within the project limits, except for one ramp. The project would result in minor increase in traffic density at the Fourth Street off-ramp in the SB direction.

Table 2-42. 2045 No Build Alternative I-15 Ramp Volumes and LOS

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Northbound										
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	6,986	489	44.1	F	7,701	431	50.7	F
On-Ramp from Cantu-Galleano Ranch Rd	Merge	2	6,497	747	Weaving		7,270	924	24.6	F
Off-Ramp to SR-60 EB	Diverge	1	7,244	1,216	Weaving		8,194	1,073	29.6	D
Off-Ramp to SR-60 WB	Diverge	1	6,028	1,170	25.9	C	7,121	1,283	33.6	F
On-Ramp from SR-60 WB	Merge	2	4,858	1,340	20.8	C	5,838	564	19.2	B
On-Ramp from SR-60 EB	Merge	2	6,198	1,820	21.9	C	6,402	1,515	20.3	C
Off-Ramp to Jurupa St	Diverge	1	7,956	618	37.8	E	8,210	467	38.5	E
On-Ramp from Jurupa St	Weave	1	7,338	641	Weaving		7,743	994	Weaving	
Off-Ramp to I-10 EB and WB	Weave	2	7,979	3,093	Weaving		8,738	3,306	Weaving	
On-Ramp from I-10 WB	Merge	1	4,886	935	27.0	C	5,432	450	25.1	C
On-Ramp from I-10 EB	Weave	2	5,821	1,905	Weaving		5,882	1,967	Weaving	
Off-Ramp to Fourth St	Weave	1	6,438	997	Weaving		6,541	744	Weaving	
On-Ramp from Fourth St	Merge	1	6,729	229	22.5	C	7,105	862	27.8	C
Off-Ramp to Arrow Rte	Diverge	1	6,958	791	35.1	E	7,967	669	38.3	E
On-Ramp from Arrow Rte	Merge	1	6,167	151	26.2	C	7,298	654	33.7	D
Off-Ramp to Foothill Blvd	Diverge	2	6,317	1,149	14.7	B	7,952	1,160	20.3	C
Loop On-Ramp from Foothill Blvd	Merge	1	5,168	163	22.9	C	6,792	836	33.3	D

Table 2-42. 2045 No Build Alternative I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
Direct On-Ramp from Foothill Blvd	Merge	1	5,331	173	23.3	C	7,628	391	32.4	D
Off-Ramp to Baseline Rd	Diverge	2	5,504	707	12.6	B	8,019	1,070	21.4	C
On-Ramp from Baseline Rd	Weave	1	4,797	537	Weaving		6,949	1,241	Weaving	
Off-Ramp to SR-210 EB	Weave	2	5,334	1,657	Weaving		8,190	2,714	Weaving	
Off-Ramp to SR-210 WB	Diverge	1	3,677	300	7.6	A	5,476	171	13.9	B
On-Ramp from SR-210 EB and WB	Weave	2	3,377	1,388	Weaving		5,305	1,887	Weaving	
Off-Ramp to Beech Ave/Summit Ave	Weave	1	4,765	458	Weaving		7,193	1,008	Weaving	
On-Ramp from Beech Ave/Summit Ave	Merge	1	4,307	333	21.5	C	6,185	570	29.3	D
Off-Ramp to Duncan Canyon Rd	Diverge	2	4,640	286	< 1.0	A	6,754	531	6.5	A
On-Ramp from Duncan Canyon Rd	Merge	1	4,354	91	19.8	B	6,223	571	29.5	D
I-15 Southbound										
Off-Ramp to Duncan Canyon Rd	Diverge	1	7,538	175	34.1	D	4,870	137	23.9	C
On-Ramp from Duncan Canyon Rd	Merge	1	7,363	402	26.1	C	4,733	371	17.6	B
Off-Ramp to Beech Ave/Summit Ave	Diverge	1	7,765	585	37.2	E	5,104	345	25.9	C
On-Ramp from Beech Ave/Summit Ave	Weave	1	7,180	1,168	Weaving		4,759	543	Weaving	
Off-Ramp to SR-210 EB and WB	Weave	2	8,348	2,254	Weaving		5,301	1,510	Weaving	
On-Ramp from SR-210 WB	Merge	1	6,094	2,957	40.0	F	3,791	1,884	24.2	C
On-Ramp from SR-210 EB	Weave	1	9,051	647	Weaving		5,675	229	Weaving	
Off-Ramp to Baseline Rd	Weave	2	9,697	1,180	Weaving		5,903	613	Weaving	
Loop On-Ramp from Baseline Rd	Merge	1	8,517	857	30.2	D	5,290	594	20.9	C
Direct On-Ramp from Baseline Rd	Merge	1	9,374	310	39.2	F	5,884	219	21.3	C
Off-Ramp to Foothill Blvd	Diverge	1	9,685	811	38.7	F	6,103	622	23.0	C
Loop On-Ramp from Foothill Blvd	Merge	1	8,874	598	41.0	F	5,481	521	26.1	C
Direct On-Ramp from Foothill Blvd	Merge	1	9,472	720	47.0	F	6,002	856	30.4	D
Off-Ramp to Arrow Rte	Diverge	1	10,191	909	40.3	E	6,859	344	27.0	C
On-Ramp from Arrow Rte	Merge	1	9,282	552	31.9	D	6,515	1,196	29.7	D
Off-Ramp to Fourth St	Diverge	1	9,834	911	39.3	E	7,711	702	31.5	D
On-Ramp from Fourth St	Weave	1	8,923	699	Weaving		7,009	1,373	Weaving	
Off-Ramp to I-10 EB	Weave	1	9,622	452	Weaving		8,382	1,111	Weaving	
Off-Ramp to I-10 WB	Diverge	2	9,170	2,022	34.2	D	7,271	1,589	27.3	C
On-Ramp from I-10 EB	Weave	1	7,148	1,892	Weaving		5,682	1,566	Weaving	

Table 2-42. 2045 No Build Alternative I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
On-Ramp from I-10 WB	Weave	1	9,040	2,183	Weaving		7,248	1,607	Weaving	
Off-Ramp to Jurupa St	Weave	2	11,223	1,222	Weaving		8,856	635	Weaving	
On-Ramp from Jurupa St	Weave	1	10,001	441	Weaving		8,221	976	Weaving	
Off-Ramp to SR-60 EB and WB	Weave	2	10,442	3,366	Weaving		9,197	3,113	Weaving	
On-Ramp from SR-60 EB	Merge	1	7,076	1,780	56.9	F	6,084	1,897	48.9	F
On-Ramp from SR-60 WB	Merge	1	8,856	1,488	62.8	F	7,981	1,420	54.0	F
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	10,221	809	61.9	F	9,502	602	57.0	F
Loop On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	9,412	86	54.6	F	8,900	222	52.8	F
Direct On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	9,498	414	65.3	F	9,122	427	63.8	F
Source: I-15 CP Traffic Study Report, March 2017.										

Table 2-43. 2045 Build Alternative I-15 Ramp Volumes and LOS

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Northbound										
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	6,373	485	38.4	E	6,542	517	40.2	F
On-Ramp from Cantu-Galleano Ranch Rd	Weave	2	5,888	787	Weaving		6,025	1,145	Weaving	
Off-Ramp to SR-60 EB	Weave	1	6,675	1,180	Weaving		7,170	1,032	Weaving	
Off-Ramp to SR-60 WB	Diverge	1	5,495	1,172	23.8	C	6,138	1,298	26.8	C
On-Ramp from SR-60 WB	Merge	2	4,323	1,530	19.7	B	4,840	1,297	20.2	C
On-Ramp from SR-60 EB	Merge	2	5,853	1,975	22.0	C	6,137	1,936	22.8	C
Off-Ramp to Jurupa St	Diverge	1	7,863	624	31.4	D	8,429	511	32.9	D
On-Ramp from Jurupa St	Weave	1	7,239	615	Weaving		7,918	1,080	Weaving	
Off-Ramp to I-10 EB and WB	Weave	2	7,399	3,094	Weaving		8,271	3,306	Weaving	
On-Ramp from I-10 WB	Merge	1	4,305	968	25.5	C	4,965	720	25.7	C
On-Ramp from I-10 EB	Weave	2	5,273	1,917	Weaving		5,685	2,334	Weaving	
Off-Ramp to Fourth St	Weave	1	5,992	1,036	Weaving		6,683	810	Weaving	
On-Ramp from Fourth St	Merge	1	6,154	234	21.3	C	7,210	1,006	29.2	D
Off-Ramp to Arrow Rte	Diverge	1	6,387	817	27.9	C	8,216	654	32.7	D
On-Ramp from Arrow Rte	Weave	1	5,570	123	Weaving		7,562	655	Weaving	
Off-Ramp to Foothill Blvd	Weave	2	5,693	1,209	Weaving		7,843	1,446	Weaving	
Loop On-Ramp from Foothill Blvd	Merge	1	4,484	160	20.7	C	6,397	843	32.2	D
Direct On-Ramp from Foothill Blvd	Merge	1	4,644	160	21.0	C	7,240	299	30.6	D
Off-Ramp to Baseline Rd	Diverge	2	4,804	831	10.2	B	7,539	1,536	20.4	C
On-Ramp from Baseline Rd	Weave	1	3,973	529	Weaving		6,003	1,066	Weaving	
Off-Ramp to SR-210 EB	Weave	2	4,637	1,746	Weaving		7,268	2,945	Weaving	
Off-Ramp to SR-210 WB	Diverge	1	2,891	421	5.2	A	4,323	222	9.7	A
On-Ramp from SR-210 EB and WB	Weave	2	2,470	1,341	Weaving		4,101	1,823	Weaving	
Off-Ramp to Beech Ave/Summit Ave	Weave	1	3,811	482	Weaving		5,924	950	Weaving	
On-Ramp from Beech Ave/Summit Ave	Merge	1	3,329	331	18.4	B	4,974	570	25.5	C
Off-Ramp to Duncan Canyon Rd	Diverge	2	3,659	271	< 1.0	A	5,544	417	2.3	A
On-Ramp from Duncan Canyon Rd	Merge	1	3,388	99	16.8	B	5,127	243	23.5	C

Table 2-43. 2045 Build Alternative I-15 Ramp Volumes and LOS (continued)

Freeway Ramp	Type	Ramp No. of Lanes	AM Peak Hour				PM Peak Hour			
			Mainline Volume	Ramp Volume	Density	LOS	Mainline Volume	Ramp Volume	Density	LOS
I-15 Southbound										
Off-Ramp to Duncan Canyon Rd	Diverge	1	5,091	126	24.7	C	3,141	171	17.3	B
On-Ramp from Duncan Canyon Rd	Merge	1	4,965	457	19.0	B	2,970	392	12.0	B
Off-Ramp to Beech Ave/Summit Ave	Diverge	1	5,422	507	28.0	C	3,362	339	19.1	B
On-Ramp from Beech Ave/Summit Ave	Weave	1	4,915	1,253	Weaving		3,023	623	Weaving	
Off-Ramp to SR-210 EB and WB	Weave	2	6,167	2,119	Weaving		3,646	1,416	Weaving	
On-Ramp from SR-210 WB	Merge	1	4,048	3,299	36.2	E	2,230	2,175	21.3	C
On-Ramp from SR-210 EB	Weave	1	7,347	1,075	Weaving		4,405	485	Weaving	
Off-Ramp to Baseline Rd	Weave	2	8,423	918	Weaving		4,891	564	Weaving	
Loop On-Ramp from Baseline Rd	Merge	1	7,505	1,059	29.2	D	4,327	750	20.0	C
Direct On-Ramp from Baseline Rd	Merge	1	8,564	389	34.3	F	5,077	290	19.3	B
Off-Ramp to Foothill Blvd	Diverge	1	8,719	873	35.0	F	5,054	579	18.7	B
Loop On-Ramp from Foothill Blvd	Merge	1	7,846	838	36.6	F	4,475	739	24.5	C
Direct On-Ramp from Foothill Blvd	Merge	1	8,684	943	43.0	F	5,214	1,137	30.1	D
Off-Ramp to Arrow Rte	Diverge	1	9,626	872	38.7	E	6,350	258	25.0	C
On-Ramp from Arrow Rte	Merge	1	8,754	933	33.5	D	6,092	1,446	30.6	D
Off-Ramp to Fourth St	Diverge	1	9,919	1,060	40.6	E	7,338	781	30.8	D
On-Ramp from Fourth St	Weave	1	8,859	702	Weaving		6,557	1,452	Weaving	
Off-Ramp to I-10 EB	Weave	1	9,560	941	Weaving		8,009	1,152	Weaving	
Off-Ramp to I-10 WB	Diverge	2	8,619	1,921	32.5	D	6,857	1,324	26.8	C
On-Ramp from I-10 EB	Weave	1	6,698	1,679	Weaving		5,533	1,447	Weaving	
On-Ramp from I-10 WB	Weave	1	8,377	2,244	Weaving		6,980	1,724	Weaving	
Off-Ramp to Jurupa St	Weave	2	10,621	1,313	Weaving		8,703	585	Weaving	
On-Ramp from Jurupa St	Weave	1	9,308	604	Weaving		8,118	1,050	Weaving	
Off-Ramp to SR-60 EB and WB	Weave	2	9,844	4,186	Weaving		8,851	3,713	Weaving	
On-Ramp from SR-60 EB	Merge	1	5,658	1,667	45.3	F	5,138	1,626	41.9	F
On-Ramp from SR-60 WB	Merge	1	7,325	1,397	49.8	F	6,764	1,554	45.0	F
Off-Ramp to Cantu-Galleano Ranch Rd	Diverge	1	8,351	973	45.0	F	8,254	748	44.9	F
Loop On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	7,378	83	37.8	F	7,506	239	40.7	F
Direct On-Ramp from Cantu-Galleano Ranch Rd	Merge	1	7,461	381	48.3	F	7,745	474	52.0	F
Source: I-15 CP Traffic Study Report, March 2017.										

Table 2-44. 2045 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours

Freeway Ramp	2045No Build Alternative AM			2045 Build Alternative AM			2045No Build Alternative PM			2045 Build Alternative PM		
	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS
I-15 Northbound												
Off-Ramp to Cantu-Galleano Ranch Rd	489	44.1	F	485	38.4	E	431	50.7	F	517	40.2	F
On-Ramp from Cantu-Galleano Ranch Rd	747	Weaving		787	Weaving		924	24.6	F	1,145	Weaving	
Off-Ramp to SR-60 EB	1,216	Weaving		1,180	Weaving		1,073	29.6	D	1,032	Weaving	
Off-Ramp to SR-60 WB	1,170	25.9	C	1,172	23.8	C	1,283	33.6	F	1,298	26.8	C
On-Ramp from SR-60 WB	1,340	20.8	C	1,530	19.7	B	564	19.2	B	1,297	20.2	C
On-Ramp from SR-60 EB	1,820	21.9	C	1,975	22.0	C	1,515	20.3	C	1,936	22.8	C
Off-Ramp to Jurupa St	618	37.8	E	624	31.4	D	467	38.5	E	511	32.9	D
On-Ramp from Jurupa St	641	Weaving		615	Weaving		994	Weaving		1,080	Weaving	
Off-Ramp to I-10 EB and WB	3,093	Weaving		3,094	Weaving		3,306	Weaving		3,306	Weaving	
On-Ramp from I-10 WB	935	27.0	C	968	25.5	C	450	25.1	C	720	25.7	C
On-Ramp from I-10 EB	1,905	Weaving		1,917	Weaving		1,967	Weaving		2,334	Weaving	
Off-Ramp to Fourth St	997	Weaving		1,036	Weaving		744	Weaving		810	Weaving	
On-Ramp from Fourth St	229	22.5	C	234	21.3	C	862	27.8	C	1,006	29.2	D
Off-Ramp to Arrow Rte	791	35.1	E	817	27.9	C	669	38.3	E	654	32.7	D
On-Ramp from Arrow Rte	151	26.2	C	123	Weaving		654	33.7	D	655	Weaving	
Off-Ramp to Foothill Blvd	1,149	14.7	B	1,209	Weaving		1,160	20.3	C	1,446	Weaving	
Loop On-Ramp from Foothill Blvd	163	22.9	C	160	20.7	C	836	33.3	D	843	32.2	D
Direct On-Ramp from Foothill Blvd	173	23.3	C	160	21.0	C	391	32.4	D	299	30.6	D
Off-Ramp to Baseline Rd	707	12.6	B	831	10.2	B	1,070	21.4	C	1,536	20.4	C
On-Ramp from Baseline Rd	537	Weaving		529	Weaving		1,241	Weaving		1,066	Weaving	
Off-Ramp to SR-210 EB	1,657	Weaving		1,746	Weaving		2,714	Weaving		2,945	Weaving	
Off-Ramp to SR-210 WB	300	7.6	A	421	5.2	A	171	13.9	B	222	9.7	A
On-Ramp from SR-210 EB and WB	1,388	Weaving		1,341	Weaving		1,887	Weaving		1,823	Weaving	
Off-Ramp to Beech Ave/Summit Ave	458	Weaving		482	Weaving		1,008	Weaving		950	Weaving	
On-Ramp from Beech Ave/Summit Ave	333	21.5	C	331	18.4	B	570	29.3	D	570	25.5	C
Off-Ramp to Duncan Canyon Rd	286	< 1.0	A	271	< 1.0	A	531	6.5	A	417	2.3	A
On-Ramp from Duncan Canyon Rd	91	19.8	B	99	16.8	B	571	29.5	D	243	23.5	C

Table 2-44. 2045 Freeway Ramps No Build and Build Alternatives LOS – AM and PM Peak Hours (continued)

Freeway Ramp	2045 No Build Alternative AM			2045 Build Alternative AM			2045 No Build Alternative PM			2045 Build Alternative PM		
	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS	Ramp Volume	Density	LOS
I-15 Southbound												
Off-Ramp to Duncan Canyon Rd	175	34.1	D	126	24.7	C	137	23.9	C	171	17.3	B
On-Ramp from Duncan Canyon Rd	402	26.1	C	457	19.0	B	371	17.6	B	392	12.0	B
Off-Ramp to Beech Ave/Summit Ave	585	37.2	E	507	28.0	C	345	25.9	C	339	19.1	B
On-Ramp from Beech Ave/Summit Ave	1,168	Weaving		1,253	Weaving		543	Weaving		623	Weaving	
Off-Ramp to SR-210 EB and WB	2,254	Weaving		2,119	Weaving		1,510	Weaving		1,416	Weaving	
On-Ramp from SR-210 WB	2,957	40.0	F	3,299	36.2	E	1,884	24.2	C	2,175	21.3	C
On-Ramp from SR-210 EB	647	Weaving		1,075	Weaving		229	Weaving		485	Weaving	
Off-Ramp to Baseline Rd	1,180	Weaving		918	Weaving		613	Weaving		564	Weaving	
Loop On-Ramp from Baseline Rd	857	30.2	D	1,059	29.2	D	594	20.9	C	750	20.0	C
Direct On-Ramp from Baseline Rd	310	39.2	F	389	34.3	F	219	21.3	C	290	19.3	B
Off-Ramp to Foothill Blvd	811	38.7	F	873	35.0	F	622	23.0	C	579	18.7	B
Loop On-Ramp from Foothill Blvd	598	41.0	F	838	36.6	F	521	26.1	C	739	24.5	C
Direct On-Ramp from Foothill Blvd	720	47.0	F	943	43.0	F	856	30.4	D	1,137	30.1	D
Off-Ramp to Arrow Rte	909	40.3	E	872	38.7	E	344	27.0	C	258	25.0	C
On-Ramp from Arrow Rte	552	31.9	D	933	33.5	D	1,196	29.7	D	1,446	30.6	D
Off-Ramp to Fourth St	911	39.3	E	1,060	40.6	E	702	31.5	D	781	30.8	D
On-Ramp from Fourth St	699	Weaving		702	Weaving		1,373	Weaving		1,452	Weaving	
Off-Ramp to I-10 EB	452	Weaving		941	Weaving		1,111	Weaving		1,152	Weaving	
Off-Ramp to I-10 WB	2,022	34.2	D	1,921	32.5	D	1,589	27.3	C	1,324	26.8	C
On-Ramp from I-10 EB	1,892	Weaving		1,679	Weaving		1,566	Weaving		1,447	Weaving	
On-Ramp from I-10 WB	2,183	Weaving		2,244	Weaving		1,607	Weaving		1,724	Weaving	
Off-Ramp to Jurupa St	1,222	Weaving		1,313	Weaving		635	Weaving		585	Weaving	
On-Ramp from Jurupa St	441	Weaving		604	Weaving		976	Weaving		1,050	Weaving	
Off-Ramp to SR-60 EB and WB	3,366	Weaving		4,186	Weaving		3,113	Weaving		3,713	Weaving	
On-Ramp from SR-60 EB	1,780	56.9	F	1,667	45.3	F	1,897	48.9	F	1,626	41.9	F
On-Ramp from SR-60 WB	1,488	62.8	F	1,397	49.8	F	1,420	54.0	F	1,554	45.0	F
Off-Ramp to Cantu-Galleano Ranch Rd	809	61.9	F	973	45.0	F	602	57.0	F	748	44.9	F
Loop On-Ramp from Cantu-Galleano Ranch Rd	86	54.6	F	83	37.8	F	222	52.8	F	239	40.7	F
Direct On-Ramp from Cantu-Galleano Ranch Rd	414	65.3	F	381	48.3	F	427	63.8	F	474	52.0	F

Source: I-15 CP Traffic Study Report, March 2017.

The off-ramp queuing analysis is shown in **Table 2-45**. None of the queues were found to exceed the storage capacity of the off-ramps for the Build and No Build conditions.

Table 2-45. Off-Ramp Queuing Analysis – 2045 No Build and Build Alternatives

Freeway Ramp	Storage (ft)	No Build		Build	
		Queue ¹ (ft) AM Peak Hour	Queue ¹ (ft) PM Peak Hour	Queue ¹ (ft) AM Peak Hour	Queue ¹ (ft) PM Peak Hour
I-15 Northbound					
Off-Ramp to Cantu-Galleano Ranch Rd	1,625	151	149	145	198
Off-Ramp to Jurupa St	1,275	276	114	276	130
Off-Ramp to Fourth St	1,250	266	424	266	403
Off-Ramp to Arrow Rte	1,200	385	399	408	453
Off-Ramp to Foothill Blvd	1,700	434	361	461	434
Off-Ramp to Baseline Rd	1,540	296	354	332	586
Off-Ramp to Beech Ave/Summit Ave	1,160	233	484	252	484
Off-Ramp to Duncan Canyon Rd	2,050	46	60	50	97
I-15 Southbound					
Off-Ramp to Duncan Canyon Rd	2,250	46	28	29	38
Off-Ramp to Beech Ave/Summit Ave	2,050	422	278	480	278
Off-Ramp to Baseline Rd	1,750	248	196	261	187
Loop On-Ramp from Foothill Blvd	1,740	284	306	296	292
Off-Ramp to Arrow Rte	1,200	625	95	489	84
Off-Ramp to Fourth St	1,625	154	260	168	276
Off-Ramp to Jurupa St	1,750	420	221	462	203
Off-Ramp to Cantu-Galleano Ranch Rd	1,440	265	117	358	196
Note: ¹ Queue indicates Synchro 95th percentile queue length (ft) for the turning movement with the longest queue. Source: I-15 CP Traffic Study Report, March 2017.					

The on-ramp metering analysis for the No Build Conditions is shown in **Table 2-46**. The recommended storage length is exceeded in the AM peak hour at three locations, and in the PM peak hour at four locations. These are the same locations where the recommended storage length is exceeded under existing conditions, with the addition of a slight (less than one car length) shortfall at the SB on-ramp from Fourth Street in the AM peak hour.

The on-ramp metering analysis for the Build Alternative conditions is shown in **Table 2-47**. The project includes the addition of on-ramp metering at the Foothill Boulevard interchange. The recommended storage length is exceeded in the AM peak hour at two locations, and in the PM peak hour at three locations. The NB on-ramp from Jurupa Street would have shorter queues with the Build Alternative than in the No Build Alternative condition due to a redistribution of trips arising from the project.

Table 2-46. On-Ramp Metering Analysis – 2045 No Build Alternative

Freeway Ramp	Number of Lanes		Storage Length (ft)	AM Peak Hour				PM Peak Hour			
				PCEs in Metered Lanes		Minimum Storage (ft) ¹		PCEs in Metered Lanes		Minimum Storage (ft) ¹	
	GP	HOV ²		GP	HOV ²	GP	HOV ²	GP	HOV ²	GP	HOV ²
I-15 NB On-Ramp from Jurupa St	2	0	930	787	-	798	-	1,090	-	1,106	-
I-15 NB On-Ramp from Fourth St	2	0	1,275	260	-	264	-	879	-	892	-
I-15 NB Loop On-Ramp from Foothill Blvd	Not Metered			170	-	Not Metered		850	-	Not Metered	
I-15 NB Direct On-Ramp from Foothill Blvd	Not Metered			223	-	Not Metered		423	-	Not Metered	
I-15 SB Loop On-Ramp from Foothill Blvd	1	0	1,030	653	-	1,325	-	554	-	1,125	-
I-15 SB Direct On-Ramp from Foothill Blvd	2	0	1,055	734	-	745	-	860	-	873	-
I-15 SB Loop On-Ramp from Fourth St	2	0	725	831	-	843	-	1,416	-	1,437	-
I-15 SB On-Ramp from Jurupa St	2	0	1,165	602	-	611	-	1,051	-	1,066	-
¹ Minimum Storage is the minimum storage length recommended in the Highway Design Manual based on 7% of peak hour demand per lane in pcphpl. Average vehicle spacing is assumed to be 29 ft. ² HOV preferential lanes may be metered or operated as un-metered HOV bypass lanes. Source: I-15 CP Traffic Study Report, March 2017.											

Table 2-47. On-Ramp Metering Analysis – 2045 Build Alternative

Freeway Ramp	Number of Lanes		Storage Length (ft)	AM Peak Hour				PM Peak Hour			
				PCEs in Metered Lanes		Minimum Storage (ft) ¹		PCEs in Metered Lanes		Minimum Storage (ft) ¹	
	GP	HOV ²		GP	HOV ²	GP	HOV ²	GP	HOV ²	GP	HOV ²
I-15 NB On-Ramp from Jurupa St	2	1	930	523	154	531	312	749	355	760	722
I-15 NB On-Ramp from Fourth St	2	1	1,275	168	86	171	174	749	263	760	534
I-15 NB Loop On-Ramp from Foothill Blvd	1	0	1,220	161	-	328	-	843	-	1,711	-
I-15 NB Direct On-Ramp from Foothill Blvd	1	1	720	121	43	247	87	244	63	495	129
I-15 SB Loop On-Ramp from Foothill Blvd	1	0	1,030	847	-	1,719	-	759	-	1,540	-
I-15 SB Direct On-Ramp from Foothill Blvd	2	1	1,150	728	226	739	458	696	448	706	909
I-15 SB Loop On-Ramp from Fourth St	2	0	725	763	-	774	-	1,468	-	1,490	-
I-15 SB On-Ramp from Jurupa St	2	1	1,165	532	149	540	303	754	321	766	652
¹ Minimum Storage is the minimum storage length recommended in the Highway Design Manual based on 7% of peak hour demand per lane in pcphpl. Average vehicle spacing is assumed to be 29 ft. ² HOV preferential lanes may be metered or operated as un-metered HOV bypass lanes. Source: I-15 CP Traffic Study Report, March 2017.											

The Build Alternative would add ramp metering at the NB loop on-ramp from Foothill Boulevard in accordance with the Caltrans policy regarding adding ramp metering whenever ramps in urban areas are modified. However, traffic density in the influence area where the on-ramp traffic merges with mainline traffic would be lower with the project than without it, so there would be less need for metering at this location with the Build Alternative.

At the SB loop on-ramp from Foothill Boulevard and SB on-ramp from Fourth Street, traffic density in the influence area where the on-ramp traffic merges with mainline traffic would be lower with the Build Alternative than with the No Build Alternative. An approximately 600 foot GP lane will be added adjacent to a portion of the existing GP lane on the westbound Foothill Boulevard Loop on-ramp to southbound I-15, to increase the number of vehicles that can access I-15 from this ramp (storage capacity), however, while there will be two lanes on a portion of this loop on-ramp, the lanes will merge together into one lane after the ramp metering line, which is prior to the freeway entrance, as a result, operationally, the loop on-ramp from westbound Foothill Boulevard to southbound I-15 will be considered to still be functioning as a one lane GP lane with respect to accessing the freeway. Geometric constraints prevent additional storage from being provided at the SB on-ramp at Fourth Street.

Average Speed and Vehicle-Hours of Delay

The daily average speed for vehicles traveling on I-15 in the study corridor is forecast to be 51.7 mph under 2045 Build Alternative conditions, compared to 44.3 mph under 2045 No Build conditions. The analysis shows that speeds would be below 20 mph without the project for large sections of the project corridor during peak hours. Speeds would improve considerably within the GP with the construction of the project. Lower speeds would remain confined to a few trouble segments. Drivers would have the option to travel at more than 60 mph when using the Express Lanes. (See **Table 2-49**)

The vehicle hours of delay in the sub-region used for VHD analysis as shown in **Table 2-48**. The project would substantially reduce traffic delay in the study region.

Table 2-48. 2045 No Build and Build Alternatives Vehicle Hours of Delay in Analysis Area

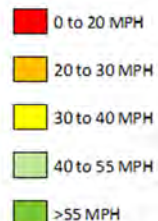
Analysis Period	Existing (2014)	2024			2045		
		No Build Alternative	Build Alternative	Effect of Project	No Build Alternative	Build Alternative	Effect of Project
AM 3-hr Peak	5,367,271	3,790,870	3,745,704	-45,166	7,714,617	7,515,317	-199,300
PM 4-hr Peak	10,943,656	8,861,967	8,580,233	-281,734	17,868,985	17,358,325	-510,660
Mid-day 3-hours	3,789,829	3,440,691	3,431,712	-8,979	6,445,858	6,340,003	-105,855
Night 14 hours	472,211	479,248	479,909	661	719,070	719,403	333
Daily	20,572,967	16,572,776	16,237,558	-335,219	32,748,530	31,933,048	-815,482

Source: I-15 CP Traffic Study Report, March 2017.

Table 2-49. Forecast Speed by Freeway Segments in 2045, AM Peak Hour

I-15 NB Mainline Segment south of	2045 No Build	2045 Build Alternative	
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)
Cantu Galleano Ranch Rd. (Off)	16	58	64
Cantu Galleano Ranch Rd. (On)	14	61	60
SR 60 EB (Off)	32	34	64
SR 60 WB (Off)	19	37	64
SR 60 WB (On)	9	61	64
SR 60 EB (On)	10	41	64
E Jurupa St (Off)	19	21	64
E Jurupa St (On)	49	54	64
I-10 (Off)	44	60	64
I-10 WB (On)	16	63	65
I-10 EB (On)	15	52	65
4th St (Off)	13	56	65
4th St (On)	16	60	64
Arrow Route (Off)	46	55	64
Arrow Route (On)	54	51	65
E Foothill Blvd. (Off)	58	56	65
E Foothill Blvd. EB (On)	60	60	65
E Foothill Blvd. WB (On)	60	61	65
Baseline Ave (Off)	60	61	65
Baseline Ave (On)	60	61	64
I-210 EB (Off)	61	62	63
I-210 WB (Off)	61	62	63
I-210 (On)	60	62	63
Beech Ave (Off)	58	59	63
Beech Ave (On)	57	57	63
Duncan Canyon (Off)	56	56	63
Duncan Canyon (On)	54	54	64
I-15 NB Mainline North Limit	54	60	64

I-15 SB Mainline Segment north of	2045 No Build	2045 Build Alternative	
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)
Duncan Canyon (Off)	37	62	-
Duncan Canyon (On)	28	62	-
Beech Ave (Off)	21	59	63
Beech Ave (On)	20	56	63
I-210 EB (Off)	15	61	63
I-210 WB (Off)	12	48	63
I-210 WB (On)	11	40	63
I-210 EB (On)	11	15	63
Baseline Ave (Off)	12	19	63
Baseline Ave (On)	13	20	59
Baseline Ave EB (On)	14	19	64
E Foothill Blvd. (Off)	18	36	64
E Foothill Blvd. WB (On)	14	35	64
E Foothill Blvd. EB (On)	19	29	64
Arrow Route (Off)	21	33	64
Arrow Route (On)	20	29	64
4th St (Off)	16	53	64
4th St (On)	14	55	64
I-10 EB (Off)	12	48	64
I-10 WB (Off)	12	42	64
I-10 EB (On)	13	35	64
I-10 WB (On)	14	24	64
E Jurupa St (Off)	21	22	64
E Jurupa St (On)	18	15	59
SR 60 (Off)	23	34	64
SR 60 EB (On)	15	56	64
SR 60 WB (On)	21	25	64
Cantu Galleano Ranch Rd. (Off)	27	27	64
Cantu Galleano Ranch Rd. WB (On)	48	50	63
Cantu Galleano Ranch Rd. EB (On)	61	57	62
I-15 SB Mainline South Limit	30	29	63

Color Code**Color Code**

Source: I-15 CP Traffic Study Report, March 2017.

Table 2-50. Forecast Speed by Freeway Segments in 2045, PM Peak Hour

I-15 NB Mainline Segment south of	2045 No Build	2045 Build Alternative		Color Code
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)	
Cantu Galleano Ranch Rd. (Off)	43	57	63	0 to 20 MPH
Cantu Galleano Ranch Rd. (On)	44	60	59	
SR 60 EB (Off)	26	61	64	
SR 60 WB (Off)	19	49	64	
SR 60 WB (On)	20	59	64	
SR 60 EB (On)	41	56	64	20 to 30 MPH
E Jurupa St (Off)	19	48	64	
E Jurupa St (On)	45	52	63	30 to 40 MPH
I-10 (Off)	54	54	64	
I-10 WB (On)	57	60	64	40 to 55 MPH
I-10 EB (On)	41	53	64	
4th St (Off)	26	53	64	>55 MPH
4th St (On)	24	60	64	
Arrow Route (Off)	52	58	64	
Arrow Route (On)	55	54	64	
E Foothill Blvd. (Off)	56	53	64	
E Foothill Blvd. EB (On)	61	58	64	
E Foothill Blvd. WB (On)	56	53	64	
Baseline Ave (Off)	55	57	64	
Baseline Ave (On)	59	59	62	
I-210 EB (Off)	59	60	62	
I-210 WB (Off)	60	61	62	
I-210 (On)	61	61	62	
Beech Ave (Off)	53	58	62	
Beech Ave (On)	53	56	62	
Duncan Canyon (Off)	55	52	62	
Duncan Canyon (On)	54	50	63	
I-15 NB Mainline North Limit	59	54	62	

I-15 SB Mainline Segment north of	2045 No Build	2045 Build Alternative		Color Code
	GP Lane Speed (mph)	GP Lane Speed (mph)	Express Lane Speed (mph)	
Duncan Canyon (Off)	61	61	-	0 to 20 MPH
Duncan Canyon (On)	61	60	-	
Beech Ave (Off)	60	61	64	
Beech Ave (On)	61	60	63	
I-210 EB (Off)	61	62	63	
I-210 WB (Off)	58	61	63	20 to 30 MPH
I-210 WB (On)	63	62	63	
I-210 EB (On)	55	54	63	30 to 40 MPH
Baseline Ave (Off)	61	60	63	
Baseline Ave (On)	62	60	64	40 to 55 MPH
Baseline Ave EB (On)	58	59	64	
E Foothill Blvd. (Off)	60	60	64	>55 MPH
E Foothill Blvd. WB (On)	50	61	64	
E Foothill Blvd. EB (On)	35	59	64	
Arrow Route (Off)	27	51	64	
Arrow Route (On)	24	59	64	
4th St (Off)	18	57	64	
4th St (On)	29	59	63	
I-10 EB (Off)	13	50	64	
I-10 WB (Off)	10	56	64	
I-10 EB (On)	11	59	64	
I-10 WB (On)	11	62	64	
E Jurupa St (Off)	12	25	64	
E Jurupa St (On)	14	24	61	
SR 60 (Off)	22	31	64	
SR 60 EB (On)	14	50	64	
SR 60 WB (On)	15	18	64	
Cantu Galleano Ranch Rd. (Off)	14	17	64	
Cantu Galleano Ranch Rd. WB (On)	19	20	63	
Cantu Galleano Ranch Rd. EB (On)	14	16	63	
I-15 SB Mainline South Limit	25	25	62	

Source: I-15 CP Traffic Study Report, March 2017.

Intersections

The horizon year (2045) No Build and Build Alternatives LOS at the study area intersections are shown in **Table 2-51**. Under the 2045 No Build Alternative, the Cherry Avenue/Wilson Avenue/Beech Avenue intersection would operate at LOS E and D in the AM and PM peak hours, respectively, but are improved under the Build Alternative to LOS D and C in the AM and PM peak hours, respectively. All other intersections would operate at their target LOS or better under the No Build Alternative; however, many would improve under the Build Alternative conditions.

Table 2-51. 2045 No Build and Build Alternatives Study Intersection Traffic Volumes and LOS

Intersection	Jurisdiction	LOS Target	AM Peak Hour				PM Peak Hour			
			No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS
Cherry Ave/Wilson Ave/Beech Ave	Fontana	C	58.0	E	44.5	D	44.8	D	33.4	C
I-15 SB Ramps/Beech Ave	Caltrans	D	48.9	D	40.6	D	12.4	B	11.9	B
I-15 NB Ramps/Beech Ave	Caltrans	D	16.1	B	17.0	B	51.0	D	42.1	D
Falcon Ridge/Summit Heights Gateway/Beech Ave	Fontana	C	26.5	C	27.1	C	26.7	C	27.9	C
Pecan Ave/Shelby Pl/Baseline Rd	Rancho Cucamonga	D	14.8	B	16.5	B	27.6	C	23.8	C
I-15 SB Ramps/Baseline Rd	Caltrans	D	25.5	C	21.4	C	11.0	B	9.9	A
East Ave/Baseline Rd	Rancho Cucamonga	D	31.7	C	31.2	C	52.1	D	42.3	D
I-15 NB Ramps/Baseline Rd	Caltrans	D	30.4	C	31.8	C	43.8	D	42.3	D
American Way/Baseline Rd	Fontana	C	19.7	B	19.6	B	15.0	B	14.7	B
Day Creek Blvd/E. Foothill Blvd	Rancho Cucamonga	D	23.0	C	23.7	C	49.4	D	51.4	D
I-15 SB Ramps/E. Foothill Blvd	Caltrans	D	15.0	B	16.6	B	10.5	B	9.9	A
I-15 NB Ramps/E. Foothill Blvd	Caltrans	D	17.7	B	17.2	B	17.4	B	21.8	C
Marketplace/E. Foothill Blvd	Rancho Cucamonga	D	24.2	C	27.9	C	41.4	D	40.5	D
Buffalo Ave/Franklin Ave/E. Fourth St	Ontario	D	27.4	C	27.3	C	42.0	D	42.3	D
I-15 SB Ramps/E. Fourth St	Caltrans	D	30.7	C	53.1	D	46.9	D	49.5	D
I-15 NB Ramps/E. Fourth St	Caltrans	D	39.6	D	39.6	D	49.4	D	50.7	D
Santa Anita/Wineville Ave/E. Fourth St	Ontario	D	35.3	D	34.5	C	31.6	C	32.1	C
S. Rockefeller Ave/Toyota Way/E. Jurupa St	Ontario	D	27.5	C	27.9	C	29.1	C	26.9	C
I-15 SB Ramps/E. Jurupa St	Caltrans	D	28.2	C	28.9	C	22.3	C	24.9	C
I-15 NB Ramps/E. Jurupa St	Caltrans	D	18.7	B	18.4	B	22.7	C	24.0	C
Auto Center Dr/E. Jurupa St	Ontario	D	31.6	C	33.7	C	33.6	C	36.3	D
Hamner Ave/Milliken Ave/Cantu-Galleano Ranch Rd	Eastvale	D	24.1	C	26.1	C	20.5	C	33.8	C

Table 2-51. 2045 No Build and Build Alternatives Study Intersection Traffic Volumes and LOS (continued)

Intersection	Jurisdiction	LOS Target	AM Peak Hour				PM Peak Hour			
			No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
			Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS	Delay (veh/s)	LOS
I-15 SB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	20.7	C	23.3	C	15.0	B	17.7	B
I-15 NB Ramps/Cantu-Galleano Ranch Rd	Caltrans	D	20.8	C	20.8	C	18.9	B	22.9	C
Wineville Ave/Cantu-Galleano Ranch Rd	Jurupa Valley	D	34.2	C	47.1	D	22.3	C	23.1	C
I-15 SB Ramps/Duncan Canyon Rd	Caltrans	D	17.3	B	18.8	B	20.7	C	21.2	C
I-15 NB Ramps/Duncan Canyon Rd	Caltrans	D	13.8	B	14.1	B	27.5	C	15.0	B
I-15 SB Ramps/Arrow Rte	Caltrans	D	45.0	D	50.4	D	21.2	C	30.4	C
I-15 NB Ramps/Arrow Rte	Caltrans	D	34.5	C	32.7	C	28.4	C	29.3	D
Source: I-15 CP Traffic Study Report, March 2017.										

The analysis of impacts of the Build Alternative show that travel demand would increase within the I-15 project limits. By the year 2024, parts of the project area would experience travel speeds below 20 mph during the peak periods. With the Build Alternative, the prevailing speed would be over 50 mph in the GP lanes and over 60 mph in the Express Lanes in the year 2024. With the Build Alternative, the addition of Express Lanes would provide improved traffic conditions for future traffic demand in all NB locations and in nearly all SB locations in the GP lanes. Speeds in the GP lanes would be low in a few bottleneck locations, but travel times would be considerably shorter than for the No Build Alternative. Moreover, the Build Alternative would provide drivers with reliable travel option at 60 mph or more when using the Express Lanes.

The project would result in minimal adverse effect on surface street intersections and ramps in the years 2024 and 2045.

Bicycle and Pedestrian Facilities

The project does not include improvements that involve the construction of new sidewalks or bicycle facilities. However, there are existing sidewalks and some Class II and III bicycle facilities at the local streets within the project limits. The project would reconstruct in kind the existing bike lanes along WB and EB Foothill Boulevard, as part of the proposed reconstruction of the ramps and intersection at this location. The project will meet current ADA standards, where reconstruction of the existing curb at ramp termini and other locations on local arterials is required due to proposed ramp reconstruction. The project would not have impacts on future master bicycle trail plans for the cities and counties of the project area.

2.1.9.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.1.10 Visual/Aesthetics

2.1.10.1 Regulatory Setting

Federal and State

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

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

2.1.10.2 Affected Environment

This section is based on the May 2017 *Visual Impact Assessment* prepared for the project. This section describes the visual resources that may be affected by the project, and identifies the viewer groups and anticipated viewers’ response to potential changes in views.

Local Plans and Policies

Caltrans- Classified Landscaped Freeway

A Classified Landscaped Freeway is a section of freeway with planting that meets the criteria of the Outdoor Advertising Regulations and is used in the control and regulation of outdoor advertising displays. To qualify for classification planting must be:

- Within state right of way;
- Continuous (no gaps greater than or equal to 200 feet);
- Ornamental;
- At least 1,000 feet in length;
- On at least one side of the freeway; and
- Require reasonable maintenance.

Portions or all of Classified Landscaped Freeway sections can be declassified if conditions have changed such that they no longer meet the criteria listed above. Two segments of I-15 within the project area are Caltrans Classified Landscaped Freeways, according to the list published by Caltrans on October 24, 2016 (Caltrans 2016b). Those segments are Post Mile 5.27 to Post Mile 5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue undercrossing) and Post Mile 7.56 to Post Mile 10.11 (from south of the

SR-210 and I-15 interchange, north approximately 2.55 miles to north of the Summit Avenue overcrossing) in San Bernardino County.

Local Plans

General plans of local jurisdictions identify visual resources that are important to the local community. They are an indicator of the visual quality of the project corridor, and potential community and viewer sensitivity to visual changes in the environment. Following is a brief summary of applicable community design goals and policies for each local jurisdiction:

City of Eastvale

The Design Chapter of the City of Eastvale's 2012 General Plan identifies the design of the City's gateways ("particularly from the I-15 freeway") and for the freeway edge as an important issue. I-15 serves as the City of Eastvale's eastern edge, including approximately 2.5 miles of the project area from Bellegrave Avenue to Philadelphia Avenue. The City's design goals include providing high-quality design throughout Eastvale; promoting the use of public art and entryway treatments into the City; and providing and maintaining attractive streetscapes in all areas of Eastvale. In addition, the City has a set of policies for the design of public spaces. Relevant policies to the I-15 CP are:

- **Policy DE-10:** Entryways to the City should provide a clear sense of arrival and set the tone for the overall design quality of Eastvale. The entry points shall be defined by the use of landscaping, trees, and/or architectural elements.
- **Policy DE-15:** Where soundwalls are used, they shall include design features that enhance visual interest and be landscaped in order to mitigate their impact on urban character and the pedestrian environment.
- **Policy DE-52:** With the exception of one Freeway Oriented Electronic Billboard, as defined by the Eastvale Zoning Code, Billboards are not permitted on I-15 in Eastvale.

City of Jurupa Valley

The City of Jurupa Valley, incorporated in 2011, is currently in the process of preparing its first interim General Plan. As part of the interim General Plan process, on April 27, 2015, the City endorsed a Community Values Statement that includes a guiding value on Open Space and Visual Quality, which is:

"We value and protect the Santa Ana River and river plain, ridgelines, and hillsides for their exceptional value for recreation, watershed, wildlife habitat, environmental health, and as scenic backdrops for the City. As part of our values, we support prevention and removal of visual blight, protection of public vistas, and community awareness and beautification activities." (City of Jurupa Valley, 2015)

The 2015 Community Values Statement on mobility states the City's support for creating and maintaining transportation networks that are safe, attractive, efficient, and provide connectivity.

City of Ontario

The Ontario Plan, the City of Ontario's General Plan, includes a Community Design Element. One of the Community Design Element sections is CD1. Section CD1-Image & Identity notes that the City is traversed by three freeways, three rail lines and two state highways and states:

"For many, the primary image of Ontario is shaped by what is seen from these transportation systems. Enhancing these transportation corridors to provide aesthetically pleasing visual experiences will make people want to experience more of what Ontario has to offer." (City of Ontario, 2008)

Image & Identity Section has the following policies:

- **Policy CD1-4:** Transportation Corridors. We will enhance our major transportation corridors within the City through landscape, hardscape, signage and lighting.
- **Policy CD1-5:** View Corridors. We require all major north-south streets be designed and redeveloped to feature views of the San Gabriel Mountains, which are part of the City's visual identity and a key to geographic orientation. Such views should be free of visual clutter, including billboards and may be enhanced by framing with trees.

Community Design Element section CD5-Protection of Investment notes that communities that are well-maintained, safe and visually appealing are more desirable places to live and conduct business.

- **Policy CD5-2:** Requires the continual maintenance of infrastructure.

City of Rancho Cucamonga

The City of Rancho Cucamonga's Design Element of the 2010 General Plan states that linear systems (such as highways, streets, sidewalks, and trails) must perform a useful function and contribute to the aesthetic environment. The Travel Corridors and Streetscapes section of the Community Design Element states:

"The City is conveniently connected to the regional freeway system through multiple interchanges at both the I-15 and SR-210 freeways. The proximity of the freeways also creates important freeway views to commercial, office, and industrial uses within Rancho Cucamonga." (City of Rancho Cucamonga, 2010)

The City of Rancho Cucamonga has also designated some streets as View Corridors, Special Boulevards and Historic/Special Design Streets. The I-15 CP crosses streets with these three designations. View Corridors are roadways where long-range vistas of scenic resources such as the foothills, San Gabriel Mountains and the San Bernardino National Forest can be preserved and framed. SR-210, including the portion that crosses I-15 within the project area, has been designated as a View Corridor.

Special Boulevards are roads where landscape and hardscape design has been and would continue to be a design focus. Arrow Route, Foothill Boulevard, and Baseline Road are I-15 cross roads that are identified as Special Boulevards.

Etiwanda Avenue and Foothill Boulevard/Historic Route 66 have been designated as Historic/Special Design streets. For Etiwanda Avenue, the design intent is to maintain the current street widths, rock curbs, street trees and rural character. The City adopted a visual improvement plan in 2002 for Foothill Boulevard/Historic Route 66 to enhance and reflect the unique historic elements of Historic Route 66. In addition, gateways are locations identified for entry monuments, providing a first impression as visitors enter the City. The west side of Baseline Road/I-15 Interchange (within the City of Rancho Cucamonga) has been identified as a gateway into the City.

The following are Community Design goals from the 2010 Rancho Cucamonga General Plan relevant to the I-15 CP:

- **Goal LU-10:** Encourage sustainable landscaping and streetscape design.
- **Goal LU-12:** Foster a variety of travel routes that are enjoyable ways to experience Rancho Cucamonga.
- **Goal LU-13:** Take full advantage of view lines and vista points with carefully designed development.

City of Fontana

The City of Fontana's 2003 General Plan Community Design Element defines the vision for the character development of the City. The City's physical character includes its major freeways and arterial highways. Two specific elements of the City's community design vision that are relevant to the I-15 CP are:

- Enhanced views of the City from freeway corridors that are attractive, diverse and appealing
- Unimpeded views of the San Gabriel and San Bernardino mountains and the Jurupa Hills

The City of Fontana has identified Foothill Boulevard (Historic Route 66) as a Theme Corridor with design guidelines. In 1987, the City commissioned a Scenic Corridor Plan and Design Guidelines Study for the North Fontana area. This study identified six scenic corridor routes and two freeways, including I-15, for special design treatment, including the creation of spacious view corridors, community design themes, streetscape identity devices and specialized landscape treatment. The following are goals and policies from the Community Design Element:

- **Goal #2:** We preserve and use our open spaces as recreational amenities, visual boundaries and view corridors.
- **Policy 1)** The design of major community facilities such as the community centers, parks, bikeways and trails will take advantage of the views provided by the adjoining mountains and hills.
- **Goal #3:** The major arterial thoroughfares of the City contribute to the overall image and diverse character of the community.
- **Policy 1)** Major arterial highways shall be improved according to customized design guidance within and adjacent to public rights-of-way.

San Bernardino County

San Bernardino County's countywide vision statement includes a Quality of Life Element that states:

"We will work together to connect and beautify communities through shared open spaces, public art and architecture that foster opportunities for neighborhood, community and family relationships and create a culture of investment in quality of life resources. (San Bernardino County, 2016)"

The County's 2007 General Plan Circulation and Infrastructure Element states the following:

- **Goal CI 5.** The County's road standards for major thoroughfares will complement the surrounding environment appropriate to each geographic region.

Riverside County

The Riverside County General Plan, December 9, 2014, includes a vision statement and fundamental values. Fundamental values related to aesthetics include:

- Distinctiveness – Maintaining and enhancing the communities' sense of place;
- Natural Environment – Maintaining areas of natural open space and sustaining unique landforms and ecosystems;
- Man-made Environment – Respecting the heritage of economic endeavors that have shaped portions of the environment

The Riverside County General Plan Land Use Element intends to achieve an integrated and coordinated land use, open space, and transportation system that maintains and enhances the county's character, with a focus on preserving lands that offer scenic beauty.

Visual Setting

The project is located in the San Bernardino/Chino Valley, within the Inland Empire Region of Southern California. The project limits traverses the cities of Fontana, Rancho Cucamonga, Ontario in San Bernardino County, and Jurupa Valley and Eastvale in Riverside County, California. The landscape is characterized by the generally flat semi-arid valley floor, which is bound by the forested high mountain areas of the San Gabriel Mountains (northwest), the San Bernardino Mountains (northeast), Chino Hills (southwest), Santa Ana Mountains (south) and Jurupa Hills (southeast).

The land use within the corridor or project corridor is primarily urban with a mix of large- and small-scale industrial buildings in the southern portion of the project area, large- and small-scale commercial developments in the central portion of the project area, and residential communities within the northern portion of the project area in the cities of Rancho Cucamonga and Fontana. Vacant land that functions as flood control basins and channels, undeveloped land, and open space and agricultural fields exist mostly in the area north of Duncan Canyon Road. In addition, the project corridor crosses several other important transportation and utility corridors, such as SR-60, the Boulder-Los Angeles transmission line, Union Pacific Railroad (UPRR) and BNSF Railway rail lines, I-10, and SR-210.

I-15 freeway is a prominent visual element within the landscape due to its size and connections with other major east-west freeway systems. Between the cities of Eastvale and Jurupa Valley in the southern portion of the project area, and Rancho Cucamonga and Fontana in the northern portion, I-15 serves as a city boundary; a defining element of the landscape.

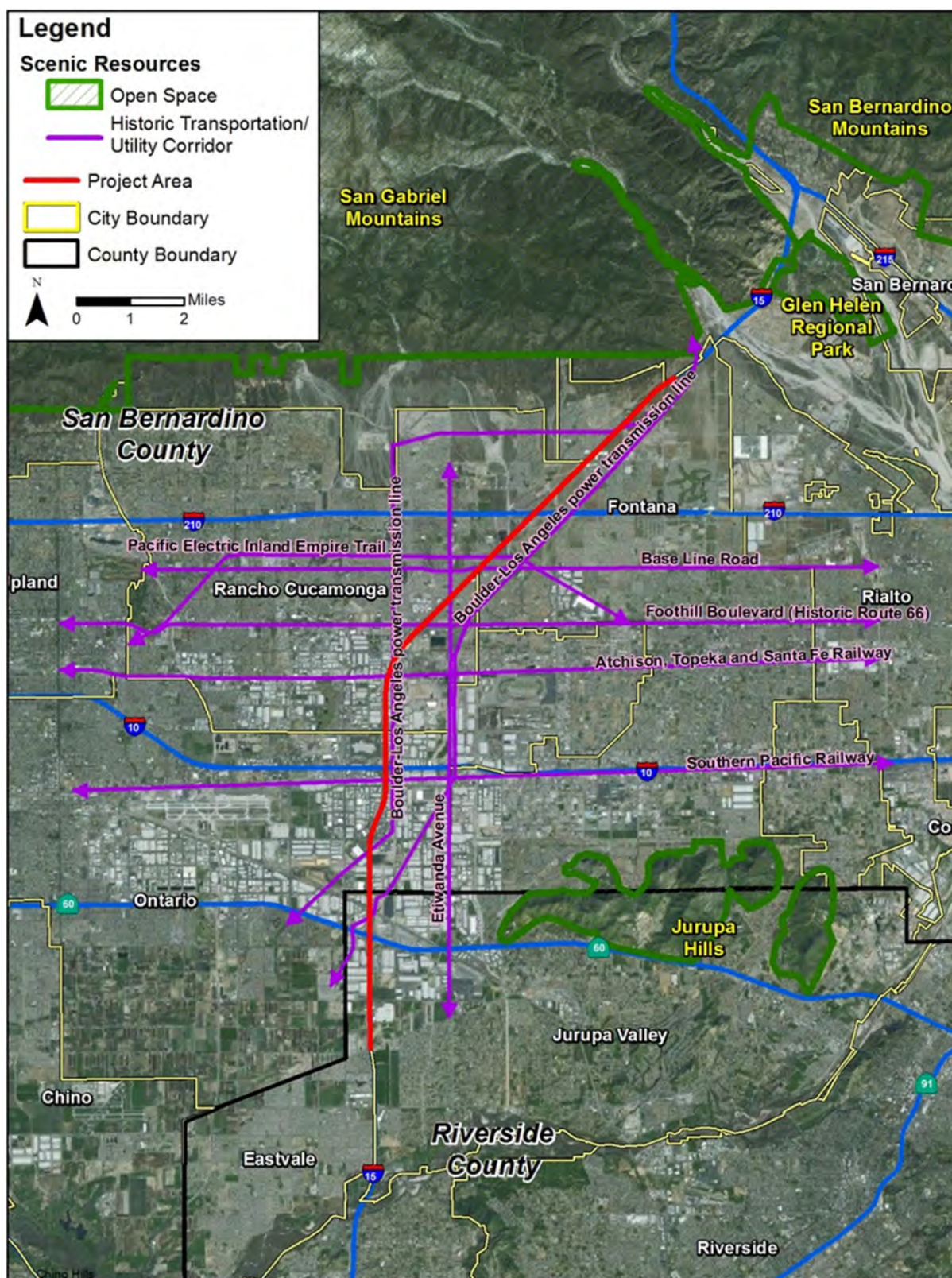
Scenic Resources

The freeway segment within the I-15 CP is not a designated State Scenic Highway, or identified as eligible to be designated, and is not part of the County of San Bernardino designated scenic routes. Therefore, a Scenic Resource Evaluation as described in Chapter 27 of the Caltrans' Standard Environmental Reference (SER) would not be required. This section identifies features within the project corridor that were recognized as scenic resources in local planning documents. Scenic resources include visually prominent open space and topographic features, such as the mountains and local hills.

General plans of the cities of Fontana, Rancho Cucamonga, Ontario, Jurupa Valley and Eastvale cities identify the San Gabriel Mountains and Jurupa Hills as scenic resources. Views of the San Gabriel Mountains and Jurupa Hills are available from the project area, and from land uses near the project area throughout the surrounding communities. Other scenic resources identified in the general plans include historic roadways, utility/drainage/transit corridors that allow for views of distant vistas, and cultural landscapes that are a feature of a city's history. The following is a list of scenic resources within the vicinity of the I-15 corridor. The open space and historic transportation and utility corridors are mapped in **Figure 2-17**.

- Open space
 - Glen Helen Regional Park
 - San Gabriel Mountains
 - San Bernardino Mountains
 - Jurupa Hills
- Historic Transportation and Utility Corridors
 - Foothill Boulevard (Historic Route 66)
 - Baseline Road (California Point of Historical Interest)
 - Pacific Electric Inland Empire Trail (a former railway, now a bicycle and pedestrian trail)
 - Etiwanda Avenue (particularly north-south views along the avenue)
 - Southern Pacific Railway (now UPRR)
 - Atchison, Topeka and Santa Fe Railway (now BNSF Railway)
 - Boulder-Los Angeles power transmission lines
- Cultural Landscapes
 - Eucalyptus windrows
 - Citrus grove and vineyard remnants

Figure 2-17. Scenic Resources Within the Vicinity of the Interstate 15 Corridor Project



Source: I-15 CP Visual Impact Assessment, May 2017.

2.1.10.3 Visual Impact Assessment Methodology

Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. This VIA follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects*, published by the FHWA in March 1981. **Figure 2-18** provides a reference for levels of visual impact by combining resource change and viewer response.

Table 2-52. Visual Impact Ratings Using Viewer Response and Resource Change

Resource Change	Viewer Response					
		Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
Low (L)		L	ML	ML	M	M
Moderate-Low (ML)		ML	ML	M	M	MH
Moderate (M)		ML	M	M	MH	MH
Moderate-High (MH)		M	M	MH	MH	H
High (H)		M	MH	MH	H	H

Source: *I-15 CP Visual Impact Assessment*, May 2017.

Visual Assessment Units and Viewsheds

Landscape Units

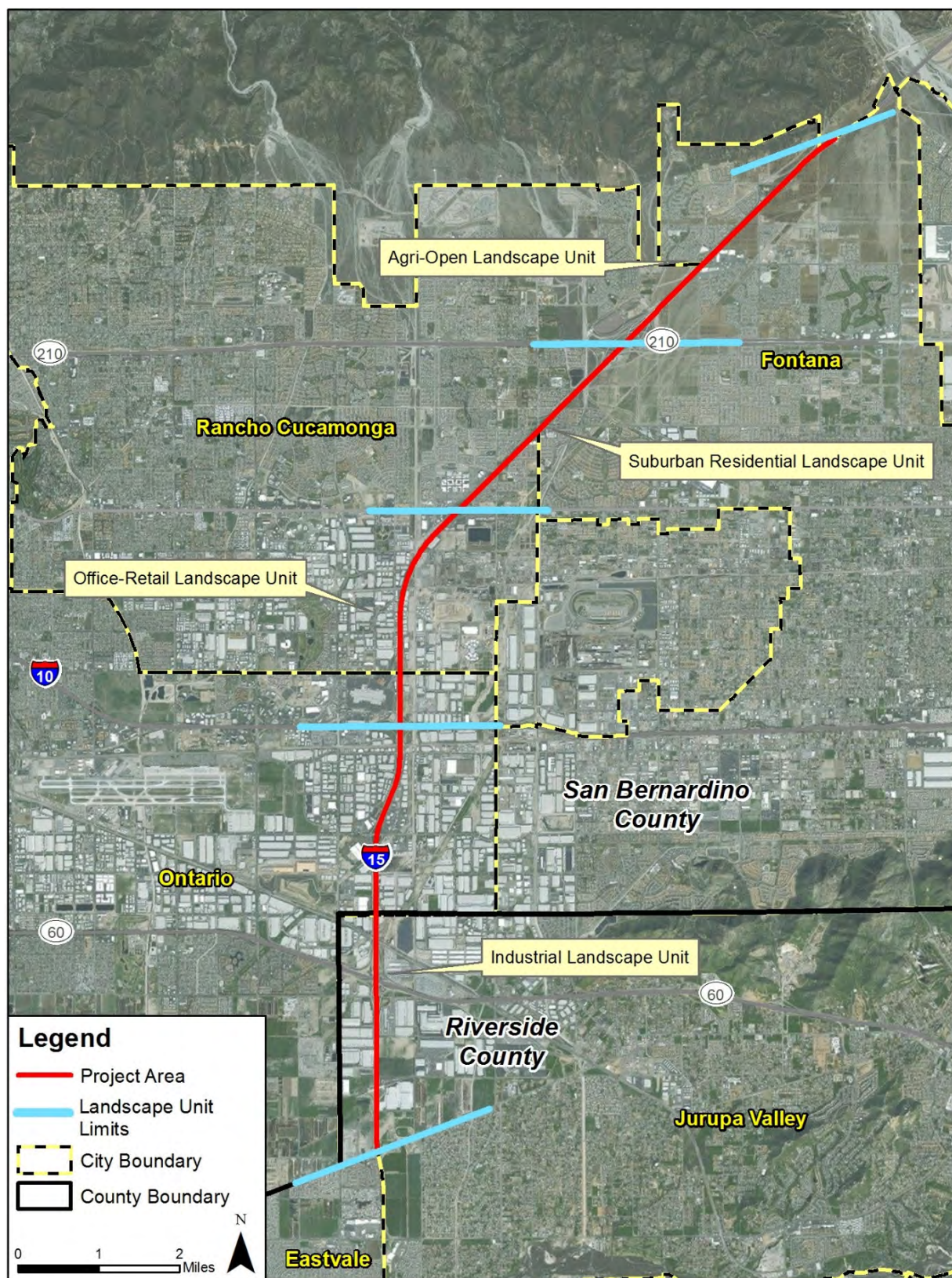
Based on existing land uses and site reconnaissance, four landscape units have been identified within the project corridor, which includes the land within the project area's viewshed (shown in **Figure 2-18**). These landscape units represent areas that have similar visual features and visual character (of the natural and built environment). Each of the landscape units still include some undeveloped land. The following is a description of the study area landscape units:

Industrial – This landscape unit consists primarily of large industrial buildings and undeveloped land. The undeveloped areas are mostly used for farming or flood control and water basin recharging. The Industrial Landscape Unit extends from Cantu-Galleano Ranch Road to the I-10 freeway.

Office-Retail – This landscape unit consists of office complexes, the Ontario Mills Mall, and other smaller retail centers. There are also some undeveloped areas used mostly for farming and utility corridors. The Office-Retail Landscape Unit extends from the I-10 freeway north to Foothill Boulevard.

Suburban Residential – This landscape unit consists primarily of residential neighborhoods; however, it also includes the Victoria Gardens retail area. Some limited open space areas are also contained in this landscape unit, functioning as utility corridors, water detention basins, and vacant land. The Suburban Residential Landscape Unit extends from Foothill Boulevard north to the SR-210 freeway.

Figure 2-18. Interstate 15 Corridor Project Landscape Units



Source: I-15 CP Visual Impact Assessment, May 2017.

Agri-Open – This landscape unit mostly consists of open space areas associated with local farming activities, utility corridors, and water recharge basins. Some residential communities also border portions of the corridor within this landscape unit; however, it is less densely populated than the Suburban Residential Landscape Unit. The Agri-Open Landscape Unit extends from SR-210 to Duncan Canyon Road.

Viewsheds

The viewsheds are a subset of the assessment units and represent areas visible to and from the freeway as seen by highway motorists and adjacent land uses. Where existing land uses limit views, the viewshed is appropriately limited to that distance. Where views extend across vacant land or over rooftops, either because there are no structures blocking views or because the highway is above the grade of adjacent uses, the viewshed extends to the next visible landform (natural or built).

From the I-15 project area, the foreground of views (0 to 1/2-mile from the viewer) includes the channelized, uninterrupted flow of I-15 and the changing scale and pattern of adjacent land uses. The middle ground (1/2-mile to five miles from the viewer) and background (greater than five miles from the viewer) of views are more expansive and include the surrounding mountain ranges and hills.

Key View Points

Key views are typical visual conditions that represent each of the project landscape units, each of the viewer groups and viewer types, and proposed project features. Key viewpoints were identified using information from site visits and local planning documents, and were selected in coordination with SBCTA and Caltrans. (See Section 2.1.10.4. Environmental Consequences for more information on the selected Key View Points)

Existing Visual Resources and Resource Change

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

Visual Character

Visual character is evaluated using the following attributes used to describe the visual resource:

- Dominance – Position, size, or contrast;
- Continuity – Uninterrupted flow of form, line, color, or textural pattern;
- Form – Visual mass or shape;
- Color – Reflective brightness (light or dark) and hue (red, green, etc.);
- Texture – Surface coarseness;
- Line – Edges or linear definitions;

- Diversity – A variety of visual patterns; and
- Scale – Apparent size as it relates to the surroundings

Figure 2-19 shows two representative photographs of the existing visual character of I-15 within the project area from the I-15 motorists' point of view.

Figure 2-19. Existing Visual Character of I-15 Within the Project Area



Photo 1: Looking north on I-15, just south of the interchange with SR-60



Photo 2: Looking south on I-15, north of Duncan Canyon Road

Source: *I-15 CP Visual Impact Assessment*, May 2017.

Dominance, Continuity and Form

The project area is dominated by the existing I-15 right of way, paved roadway, and its connections to other roads in the region's transportation network. The visual character within the I-15 project area is that of an urban highway; it is a wide linear element of the landscape with a continuity that flows through and beyond the project area.

Color and Texture

The color and texture elements include the bridge decking and structural columns and the color and texture of the concrete materials. The proposed project would maintain the same existing light gray color as the existing I-15 roadway. The repaving and restriping of the highway would provide a consistency in the color and texture of the I-15 roadway within the project area.

Line, Diversity, and Scale

Throughout the project area, the I-15 right of way serves as a defining line or edge to the abutting cities. Land uses adjacent to I-15 within the project corridor provide visual diversity through a variety of visual patterns that range in form and scale from large industrial and commercial buildings in the south, to smaller single-family residential homes north of Foothill Boulevard, to the urban edge and the agricultural land use and open space in the north.

Existing line or edges of cities along the project area and the diversity in the existing visual pattern/character of development adjacent to I-15 would not be altered even with the widening of the freeway.

Visual Quality

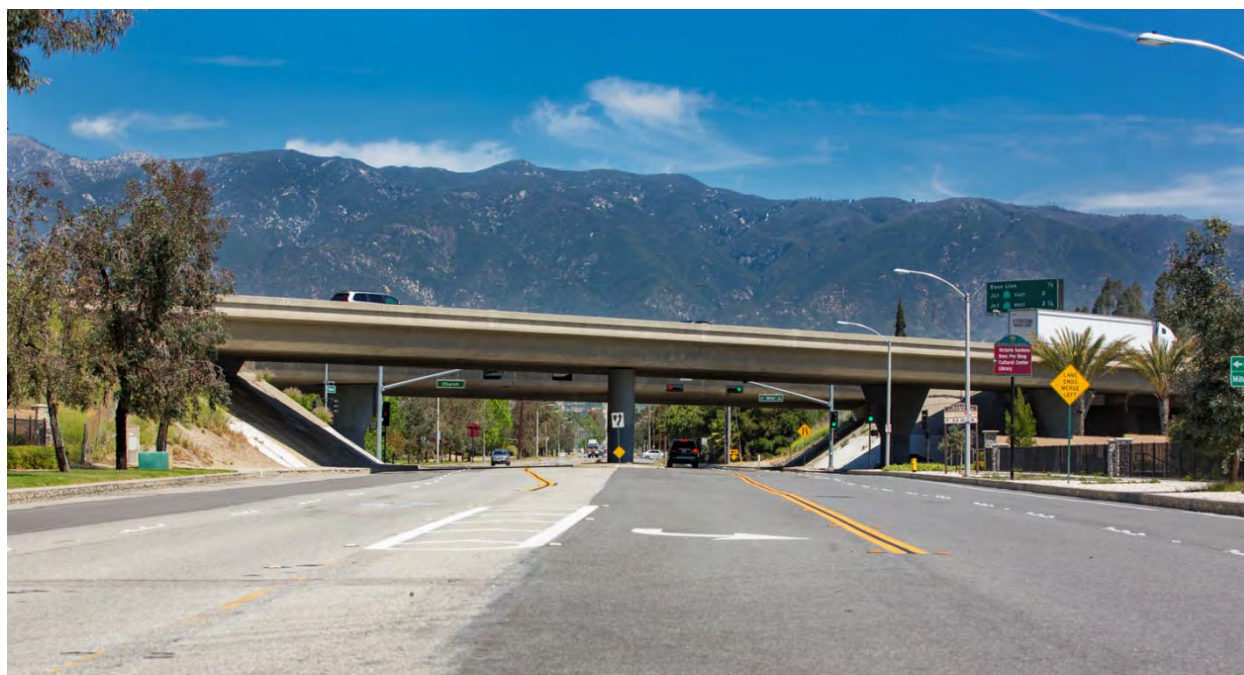
Visual quality evaluates viewers' appreciation of visual resources and visual character of a particular scene. Visual quality is measured by three criteria: vividness, intactness, and unity. These criteria are defined as follows:

- Vividness – The extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements as they combine to form a striking and distinctive visual pattern.
- Intactness – The integrity of visual pattern in the natural and built landscape, and the extent to which the landscape is free from visually encroaching features.
- Unity – The degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony or inter-compatibility between landscape elements.

Vividness

The landscape of the project corridor is unique because of its location within the San Bernardino Valley. The wide-open expanses of both the I-15 right of way and the valley floor provide viewers with contrasting and striking views of the surrounding mountainous topography. As demonstrated by value statements and policies in many of the local city plans, uncluttered and unobstructed scenic views of the San Bernardino and San Gabriel mountains contribute to the existing vividness of the project corridor. **Figure 2-20** (Photograph of Existing Views) provides an example of the mountains views from a local road with the I-15 freeway in the view foreground, and the mountains in the background.

Figure 2-20. Photograph of Existing Views



View from Etiwanda Avenue, just south of I-15, looking north

Source: *I-15 CP Visual Impact Assessment*, May 2017.

Intactness

As demonstrated by statements, policies, and goals in local plans, creating and enhancing an attractive environment along existing freeways and having attractive views from the freeway to the adjacent commercial, office, and industrial areas is important. These attributes contribute to the project area's and project corridor's existing intactness.

Unity

Throughout the project area, I-15 serves as a visual and physical boundary in the east-west direction. However, in the north-south direction, the freeway joins together elements of the landscape, such as cities and transitions in land uses. This effect of the existing I-15 roadway on the unity of the existing project area and project corridor is recognized by local plans.

Viewers and Viewer Response

In addition to the Highway Users viewer group, three types of neighbors specific to the project area based on existing land uses have been identified as viewer groups. The three types of neighbors are motorists (local roads), residents, and recreation users. Viewer response is a measure or prediction of the reaction to changes in the visual environment from a viewer's exposure and sensitivity. Viewer exposure has three aspects: the location of viewer in relation to the view, the size (quantity) of the viewer group, and the frequency and duration of their view. Viewer sensitivity is a measure of recognizing an aspect of a view based on the viewer's activity, awareness, and values. The following is a description of the viewer groups and viewer types, including their exposure to the project corridor, their general level of sensitivity to visual changes, and the anticipated level of their response to changes in the visual environment:

Highway Users

This viewer group consists of the general public using I-15, a large quantity of viewers. Motorists using I-15 include residents within the local area, commuters coming from the High Desert area to local work sites, truck drivers hauling goods from the ports to all parts of the inland and High Desert areas, and vacationers traveling to the High Desert area and Las Vegas. Because motorists using I-15 are traveling at higher speeds, they are generally paying more attention to traffic, are less aware of the surrounding visual resources, and their view of the project area and project corridor is for a brief duration. Freight haulers and vacationers have infrequent exposure to the project area and would be less aware of changes to visual resources. Local residents and commuters on I-15 have a high level of familiarity with the project area; they have frequent exposure and would be aware of changes to visual resources. I-15 is recognized as an entryway to the local communities and as an important way of viewing their city. In addition, the planning documents of the local communities recognize the importance of an efficient transportation system. Overall, based on this viewer group's exposure and sensitivity, their anticipated response to visual changes would be moderate-low.

Neighbors

Motorists (Local Roads) – This viewer type consists primarily of area residents and nearby commuters who work locally and use local roads for their trip, but would also include some vacationers who may be using local roads to access gas, food, and entertainment (a medium quantity of viewers). These viewers are traveling at slower speeds than highway users, which allows them some opportunity to view the surrounding scenery for a medium duration. Area residents and local commuters on local roads would have a high level of familiarity with I-15 and the underpass and overpass bridges in the project area; they have frequent exposure to the project area and would be aware of changes to visual resources. Vacationers would have a low level of familiarity with I-15 in the project area; they have infrequent exposure and would be less aware of changes to visual resources. The planning documents of local jurisdictions identify transportation corridors as a source of aesthetic experience and have policies and special roadway designations to provide for enhancing the visual experience within major transportation corridors. Overall, based on this Neighbor viewer type's exposure and sensitivity, their anticipated response to visual changes would be moderate-low.

Residents – This viewer group consists of area residents with views of the project area, and represent a small quantity of viewers. Residents of the neighboring communities would have a high level of familiarity with local views and a strong sense of ownership. They would have frequent exposure to the project area for a high duration and be very aware of changes to visual resources. The referenced local jurisdictions planning documents identify that maintaining, preserving, and enhancing the unique character and the visual setting of the San Bernardino Valley is important. Based on this Neighbor viewer type's exposure and sensitivity, their anticipated response to visual changes would be high.

Recreation users – This viewer type within the neighbor group consists of area residents and the general public who would be using the parks and trails near the project area, such as the Glen Helen Regional Park and the Pacific Electric Trail, and represent a medium quantity of viewers. This viewer group would be sensitive to scenic quality (although they would not expect a pristine scenic experience at publicly used facilities), would be expected to have frequent exposure to the

project area for a medium duration, and would be moderately aware of changes to visual resources. The planning documents of local communities within the project area emphasizes the preservation of views of scenic resources from parks, trails, and open spaces. Based on this Neighbor viewer type's exposure and sensitivity, their anticipated response to visual changes would be moderate-high.

2.1.10.4 Environmental Consequences

No Build Alternative

Under the No Build Alternative, impacts to the visual character and quality within the project corridor would be unchanged. There would be no changes to visual resources as a result of the I-15 CP. As traffic volumes on I-15 within the project area increase, there would be increased light and glare from vehicles, as well as the visual distraction and clutter of congestion, which would reduce the visual intactness. However, the reduction in intactness would be a low impact to visual quality. There would be no impact to the visual resources and views under the No Build Alternative.

Build Alternative

Temporary

With the Build Alternative, construction impacts on visual quality would be associated with the presence of equipment and workers, material stockpiles, debris, signage, and demolition activities. Construction staging areas would also have a temporary visual effect, introducing new elements into the visual environment that would reduce the intactness of the project area. Dust from construction activities, such as grading, could affect visibility and views, as could light and glare emanating from construction lighting or reflections from signage or machinery. Brightly colored and potentially reflective, signs or lighting serve an important safety purpose for construction workers and the public. The movement of large, typically bright yellow construction vehicles would add potentially visually distracting elements to views. Potential traffic congestion associated with work areas also could intrude upon views. These visual impacts could reduce the intactness and unity of the existing visual quality. These temporary impacts, which would disrupt connectivity and unity within views, would have a moderate adverse impact on the visual quality of the project area for a short term during project construction.

Vegetation removal would be limited to areas where the Build Alternative would require widening I-15 or grading beyond the existing edge of pavement or in areas where bridge structure widening would occur between the northbound and southbound structures. Types of vegetation that would be removed are primarily grasses and desert scrub/shrubs that are growing adjacent to the existing I-15 roadway or that are growing out within the existing paved slope under overpasses. However, along the Foothill Boulevard NB on-ramp and the Foothill Boulevard SB off-ramp (between Post Mile 5.27 and 5.71, for a length of approximately 3,350 feet), the project proposes to widen to the outside of the I-15 roadway and would disturb the existing vegetation/landscaping, which includes mature trees. Landscaping that is disturbed by the project would be replaced within the same general location, if possible.

Permanent

This section discusses visual impacts at several viewpoints that were identified to be representative of the overall or typical visual conditions within the project area. For each

landscape unit, this section describes and illustrates the existing visual character and quality of the key viewpoint(s) and the project's potential change to visual resources. This section also includes the expected viewer response to the visual resource change and evaluates the direct visual impact of the Build Alternative.

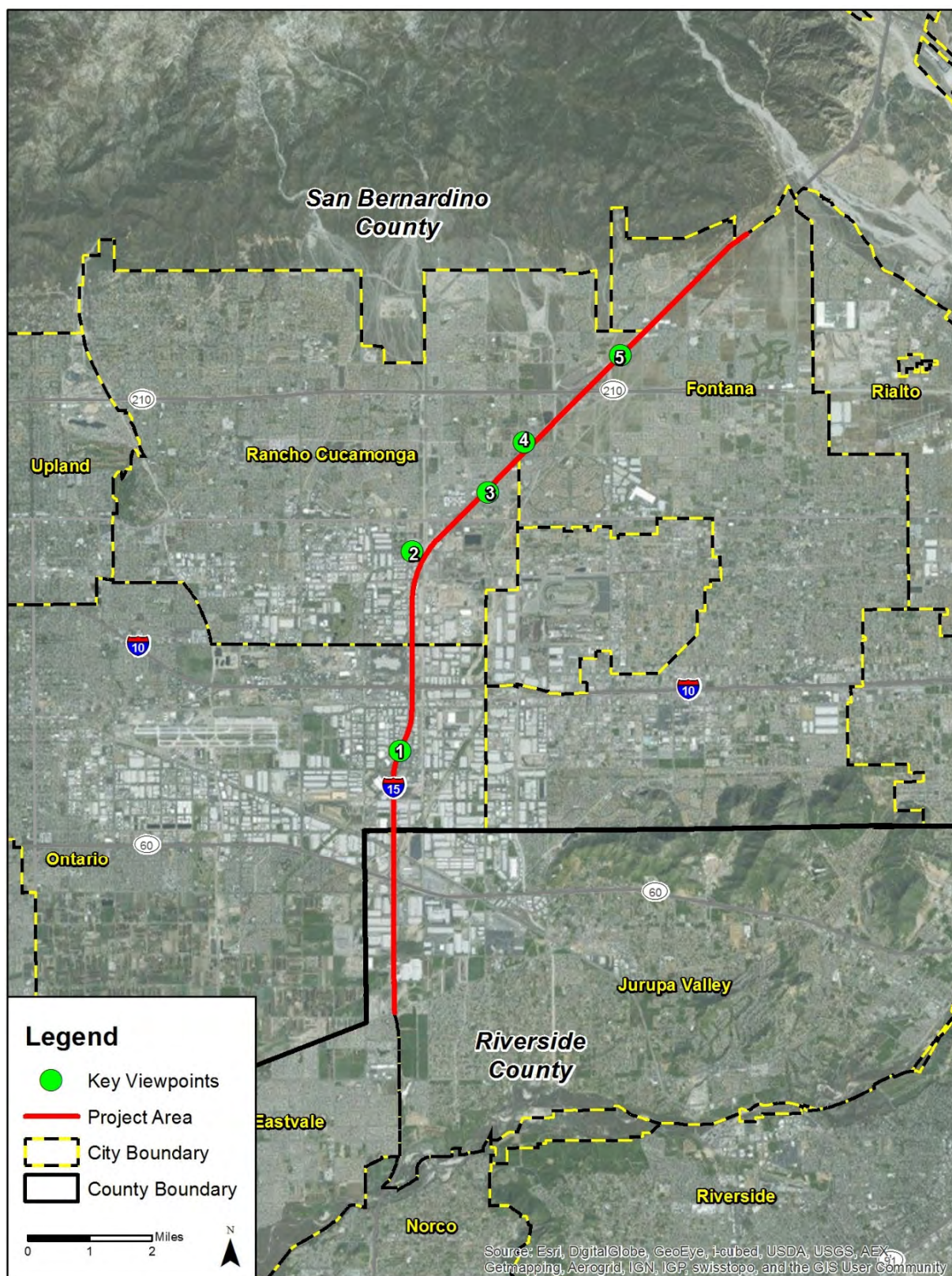
Key Views

The key viewpoints were identified in coordination with SBCTA and Caltrans using information obtained from site visits and local planning documents, and they represent each of the project area's four landscape units, each of the viewer groups and viewer types, and proposed project features, such as a retaining wall or bridge. **Table 2-53** identifies the five key viewpoints and the landscape unit, viewer group and viewer type, and project features that they represent. **Figure 2-21** provides an overview map of all five key viewpoints in the project corridor. More detailed location maps of the key viewpoints (including the direction of the view, a photograph of the existing view, and nearby proposed project features) are provided for each landscape unit.

Table 2-53. Key Viewpoints Used in the Visual Impact Analysis

Key Viewpoint		Represents		
Number	Location	Landscape Unit	Viewer Group-Viewer Type	Build Alternative Project Features
1	I-15 heading north (north of Jurupa St)	Industrial	Highway Users	Addition of two NB and two SB Express Lanes in the existing paved center median, separated by a painted buffer and pylons. Widen both sides of I-15 within the existing unpaved portion of the right of way, which would remove some of the existing grass and shrubs in this area. Addition of a new retaining wall with a jersey barrier on the west side of the interstate. Repaving and restriping of I-15 travel lanes.
2	Arrow Route heading east	Office-Retail	Neighbor - Motorists (Local Roads)	Widen NB and SB I-15, including widening of bridges/overpasses over Arrow Route and Day Creek Channel. Widen existing NB and SB bridges/overpasses into the existing open center of I-15 over Arrow Route. Modify engineered grassy berms, including removing the grass and shrubs growing on these berms.
3	Residential neighborhood at Etiwanda Ave	Suburban Residential	Neighbor - Residents	Widen existing NB and SB bridges/overpasses into the existing open center of I-15 over Etiwanda Ave, with decking that is slightly lower in height. Add narrower, cylindrical columns to support bridge/overpass widening. Modify existing concrete slope paving underneath the bridges/overpasses. New under soffit lighting under the I-15 overpass. Vegetation removal limited to the grasses and weeds that are growing up between the existing pavement seams.
4	Pacific Electric Bike Trail toward I-15	Suburban Residential	Neighbor - Recreationists	Widen existing NB and SB bridges/overpasses into the existing open center of I-15, with decking that is slightly lower in height. Add columns, with same aesthetic design treatment, to support bridge/overpass widening. Modify concrete slope paving under the bridges/overpasses. Vegetation removal limited to the grasses and weeds that are growing up between the existing pavement seams.
5	I-15 heading south	Agri-Open	Highway User	Add one NB and one SB Express Lane in the existing paved center median. No vegetation removal.
Source: I-15 CP Visual Impact Assessment, May 2017.				

Figure 2-21. Overview of Key Viewpoint Locations



Source: I-15 CP Visual Impact Assessment, May 2017.

In addition, to assist in evaluating the potential direct visual impacts of the Build Alternative, photo-simulations for three of these views were prepared. One is an informational simulation of I-15 with the Build Alternative. This photo-simulation is of I-15 as viewed from the Jurupa Street Overcrossing, looking north. Electric Trail crosses under I-15 at that location. Two other simulations are experiential and portray the experience of the Build Alternative from the viewer group's perspective. One of the experiential simulations is from the Neighbor - Residential viewer group and type's perspective from a sidewalk in the residential neighborhood along Etiwanda Avenue, looking southeast. The other experiential simulation is from the Neighbor - Recreationists viewer group and type's perspective from where the Pacific Electric Trail crosses under I-15. These photo-simulations are discussed in the evaluation of the respective landscape unit.

Industrial Landscape Unit- Key View 1

Existing Condition

Figure 2-22 provides a detailed map of the location of Key Viewpoint 1, which is on I-15 NB, north of Jurupa Street in the City of Ontario, and within the Industrial Landscape Unit. The figure also provides a photograph of the existing view of the project area from the perspective of the Highway User group. The aerial background of the map shows the urban/industrial visual character of the project corridor at this location, which includes the wide linear element of I-15 and the adjacent industrial buildings, parking lots, and local road network. The existing visual quality of Key Viewpoint 1 and the Industrial Landscape Unit is considered moderate.

Figure 2-23 shows an existing condition photograph and a photo simulation of the proposed I-15 CP from a location near Key Viewpoint 1 looking north from the Jurupa Street overpass. This simulation shows the following:

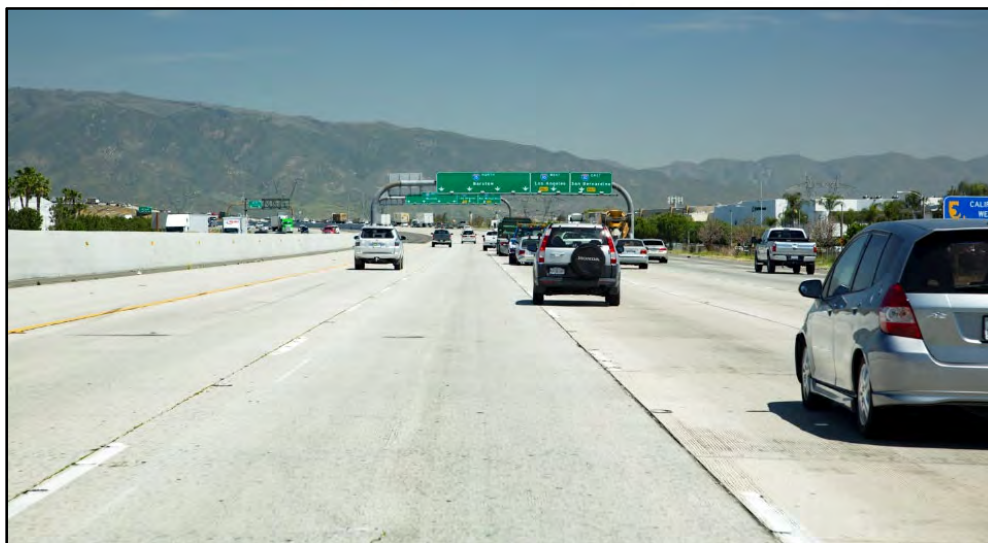
- Addition of Express Lanes in place of the paved center median;
- Widening of both sides of I-15 within the existing unpaved portion of right of way;
- A new retaining wall with a jersey barrier on top on the west side of the interstate;
- Painted buffer and pylons to separate the Express Lanes from the GP lanes;
- Repaving and restriping all I-15 travel lanes; and
- Additional and modified signage.

Resource Change

As this simulation demonstrates, the Express Lanes would be at the same grade as the existing roadway and would not block or alter views of the surrounding industrial uses. In addition, they would not block or alter views from I-15 of the surrounding scenic vistas and open space such as the Jurupa Hills and San Bernardino Mountains, as shown in the photograph in **Figure 2-22**. In accordance with the Community Design Element of the City of Ontario's General Plan, this shows that the existing image of Ontario as seen from I-15 does not change as a result of the project.

The Build Alternative would be in keeping with the existing visual character and visual quality and the visual resource change would be low. In addition, the Build Alternative would enhance

Figure 2-22. Key Viewpoint 1- Map and Photograph of Existing View



Source: I-15 CP Visual Impact Assessment, May 2017.

Figure 2-23. View of I-15 from the Jurupa Street Overpass



Existing condition photograph taken from the Jurupa Street Overcrossing of I-15, looking north



Photo-simulation condition with the proposed Interstate 15 Corridor Project

Source: I-15 CP Visual Impact Assessment, May 2017.

the existing transportation system and efficiency. This would be consistent with the goals and policies of the local communities in the corridor and would reduce the visual distraction due to traffic congestion, thereby improving the visual quality along I-15 for the Motorists (Highway) viewer group.

Viewer Response

It is anticipated that the low visual resource change from the Build Alternative would be in keeping with the viewer group's expectations of the I-15 visual environment. As stated above, viewers in the Highway Users viewer group are considered to have a moderate-low response to changes in the visual environment.

Visual Impact

With a low level of resource change and a moderate-low viewer response, the Build Alternative would have a moderate-low visual impact within the Industrial Landscape Unit.

Office-Retail Landscape Unit- Key View 2

Existing Condition

Figure 2-24 provides a detailed map of the location of Key Viewpoint 2 within the Office-Retail Landscape Unit, which is along Arrow Route, west of I-15 in the City of Rancho Cucamonga. **Figure 2-24** also provides a photograph of the existing view of the project corridor from the perspective of a viewer in the Neighbor - Motorists (Local Roads) viewer group and viewer type in this location. The aerial background of the map of Key Viewpoint 2 shows the urban visual character of the project corridor in this location, which again includes the wide linear element of I-15 and adjacent commercial buildings and also includes some undeveloped/open parcels of land. The existing visual quality of Key Viewpoint 2 and the Office-Retail Landscape Unit is moderate.

Resource Change

From Key Viewpoint 2, looking east toward I-15, a new low retaining wall to support the I-15 roadway would be visible to motorists along Arrow Route, to both the north and south of Arrow Route. These low retaining walls would also be visible from the buildings that are immediately adjacent to I-15; the buildings immediately adjacent to I-15 would block the view of the proposed retaining walls further away from I-15. From Key Viewpoint 2, the visual changes from the Build Alternative would also include enclosing the existing opening between the northbound and southbound lanes of I-15 that travel over Arrow Route. There is no new signage proposed along I-15 where it crosses Arrow Route that would be visible from Key Viewpoint 2. The Build Alternative would not obstruct a scenic vista or damage scenic resources. In addition, the Build Alternative would maintain existing freeway views to the commercial and office uses within the City of Rancho Cucamonga, which were recognized in the City's General Plan as being important. In addition, the City of Rancho Cucamonga has identified Arrow Route as a Special Boulevard, where the landscape and hardscape of the road is a design focus. The Build Alternative would not change the landscape or hardscape design of Arrow Boulevard. The Build Alternative would be in keeping with the existing visual character and visual quality and the visual resource change would be low.

Figure 2-24. Key Viewpoint 2 - Map and Photograph of Existing View



Source: I-15 CP Visual Impact Assessment, May 2017.

Viewer Response

From Key Viewpoint 2, change to the visual resource from the Build Alternative would be barely visible to motorists on Arrow Route approaching I-15. Motorists may notice a change in lighting where the new decking would block sunlight below and cast a shadow. Enclosing the decking above Arrow Route would be most visible when a Neighbor - Motorist (Local Roads) viewer is driving beneath I-15, particularly if the driver was a resident or nearby commuter who is familiar with the area, where it would be noticeable that the size of the overhead structure has been increased. Crossing under I-15 on Arrow Route would be for a short distance and a brief duration of the viewer's total trip and visual experience.

Neighbor - Motorists (Local Roads) viewers are considered to have a moderate-low response to changes in the visual environment.

Visual Impact

With a low level of resource change and a moderate-low viewer response, the Build Alternative would have a moderate-low visual impact on the Office-Retail Landscape Unit views.

Suburban Residential Landscape Unit- Key View 3

Existing Condition

Figure 2-25 provides a detailed map of the locations of Key Viewpoints 3 and 4 within the Suburban Residential Landscape Unit in the City of Rancho Cucamonga. Key Viewpoint 3 is from the residential neighborhood near Etiwanda Avenue, looking north and northwest. The aerial background of the map shows the residential neighborhoods and areas of open space and recreation that are on both sides of I-15 in this landscape unit. The existing visual quality of Key Viewpoint 3 within the Suburban Residential Landscape Unit is moderate-high.

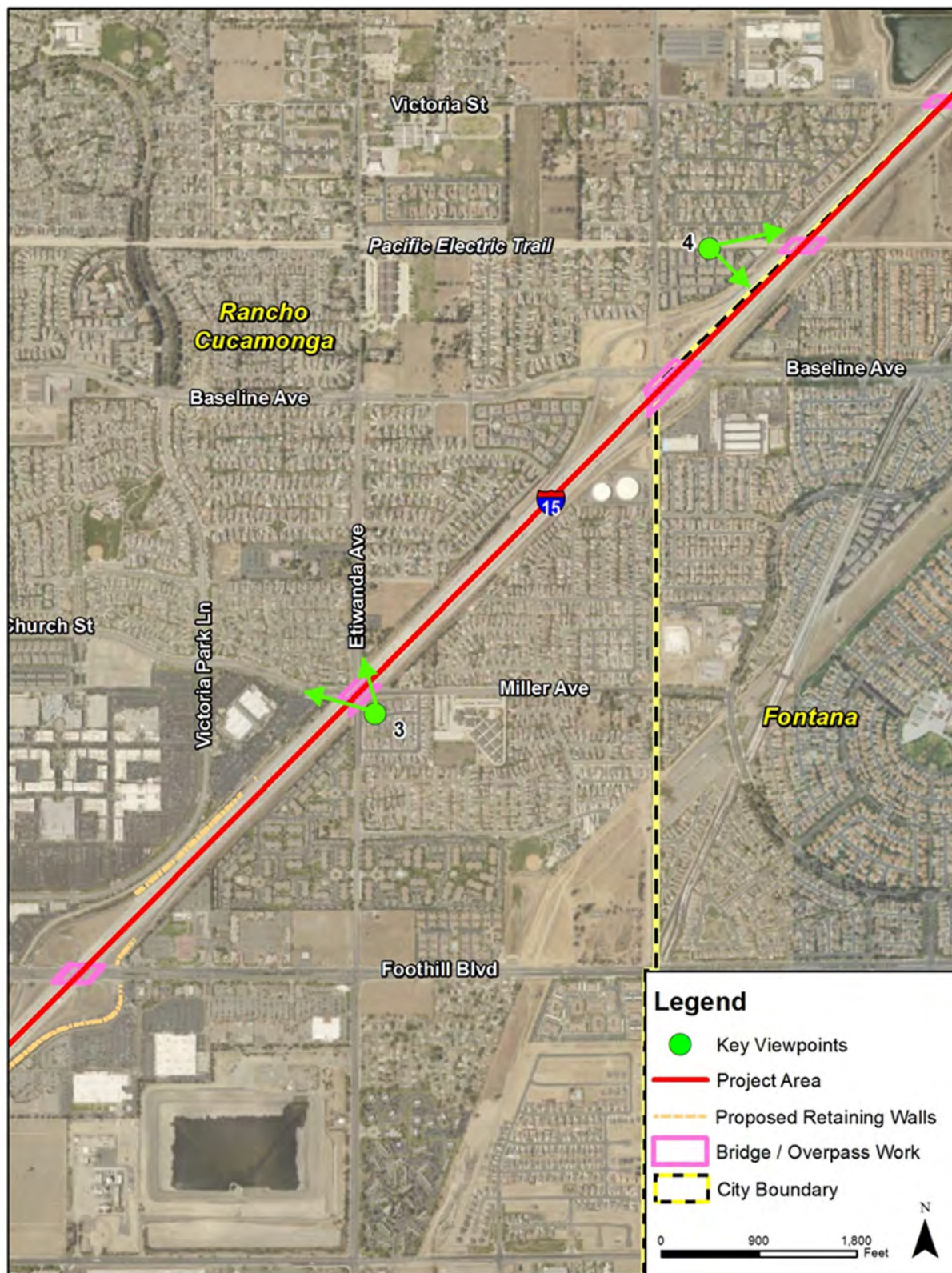
To provide a Neighbor - Residential viewer's perspective of the I-15 CP, **Figure 2-26** shows an existing condition photograph and a photo simulation of the Build Alternative at Key Viewpoint 3. The photograph and simulation shown in **Figure 2-26** is from a view of I-15 from the sidewalk along Etiwanda Avenue just north of I-15, looking southeast. This simulation shows:

- New decking, at a slightly lower height, filled in between the existing northbound and southbound I-15 bridges;
- A new narrower, cylindrical column, with a lower height of the column supports, at the south end;
- New under-soffit lighting under the I-15 overpass; and
- Construction of soundwall S-344, S-353, S-396, and S-411

Resource Change

From the perspective of nearby residences near Key Viewpoint 3, the visual changes from the Build Alternative would be from enclosing the existing opening between the NB and SB lanes that travel over Etiwanda Avenue and the resulting loss of light between the two existing structures. Retaining walls are not proposed along I-15 near residential areas. The new decking

Figure 2-25. Key Viewpoints 3 and 4 Map



Source: I-15 CP Visual Impact Assessment, May 2017.

Figure 2-26. Overcrossing of Etiwanda Avenue, Existing and Proposed Conditions (Key View 3)



Existing conditions photograph along Etiwanda Avenue just north of I-15, looking southeast



Photo-simulation condition with the proposed project along Etiwanda Avenue just north of I-15 , looking southeast

Source: *I-15 CP Visual Impact Assessment*, May 2017.

Note: Revised to include the soundwalls planned for the project after the noise barriers protocol survey and approval of the noise barrier, July 2018.

would be visible from residences immediately adjacent to I-15; however, these changes are expected to be barely visible/noticeable from residences further away from I-15. The new decking would not increase the overpass height and would not block existing views of scenic vistas of the surrounding mountains.

The City of Rancho Cucamonga has identified Etiwanda Avenue as a Historic/Special Design Street, where the design intent is to maintain the current street widths, rock curbs, street trees and rural character. The Build Alternative would not change the design of Etiwanda Avenue. Overall, Key Viewpoint 3 would have a low visual resource change as a result of the project.

Four noise barriers in the form of soundwalls are planned to be constructed within this Residential Landscape Unit. Noise barriers 344 and 353 are located along both the east and west sides of I-15 south of Church Street/Miller Avenue and extending north to just south of Baseline Road. (See Figure 2-50 Sheets 1 and 2 in Noise Section 2.2.7). Key Viewpoint 3, which is from a Residential viewer's perspective near Etiwanda Avenue is located within this unit. Depending on the viewer's distance from the I-15, the soundwalls will partially impact some existing views.

From the residential areas on the west side of I-15, as shown in the photo-simulation in **Figure 2-26**, at the I-15 overcrossing of Etiwanda Avenue, the noise barrier 353 would not substantially impact existing views because it is an addition to the existing bridge structure. The existing facility obstructs the expanded views. Views at that location are dominated by the existing structure and the I-15 freeway.

Soundwall 344 is anticipated to result in some reduction of existing views of the San Gabriel Mountains from residences adjacent to Etiwanda Avenue just south of the I-15, however, these views are currently impacted by the existing bridge over Etiwanda as well as existing trees. In this segment, the I-15 is at a slightly higher elevation than the existing homes; however, some of these homes may have existing views of the San Gabriel Mountains (at least from their second stories) that would be potentially reduced as a result of construction of this planned soundwall. Additionally, at this location where I-15 crosses over Etiwanda Avenue, the planned soundwalls may potentially reduce views of the San Gabriel Mountains from the perspective of drivers heading northbound on Etiwanda Avenue.

Noise barriers 396 and 411 are also planned to be constructed within the limits of this Residential Landscape Unit. Respective soundwall locations begin just north of Baseline Avenue along the east side of the I-15 mainline and include a section adjacent to the east side of the NB on-ramp, and along the west side of the I-15 mainline, the soundwall begins just north of Victoria Street (see Figure 2-50, Sheet 3 in Noise Section 2.2.7).

On the east side of I-15, noise barrier 396, which will be constructed adjacent to a portion of I-15 as well as along the east side of the NB on-ramp to I-15 is not expected to impact any existing views of the San Gabriel Mountains.

On the west side of the I-15, noise barrier 411, which will be constructed just south of the Victoria Street undercrossing and extends 1,498 feet to the south will not obstruct views except for the portion in proximity to the Victoria Street undercrossing. This portion will potentially reduce views of the San Bernardino mountains; however, because noise barrier 411 will be an

addition to the existing Victoria Street undercrossing structure the impact is not anticipated to be substantial.

Viewer Response

Viewers in the Neighbor - Residential viewer group and viewer type are considered to have a high response to changes in the visual environment.

Visual Impact

With the moderate level of resource change and the high viewer response, the project would be expected to have a moderate-high visual impact in this location. This moderate-high impact would be limited to a small number of residences that are located immediately adjacent to I-15.

Suburban Residential Landscape Unit- Key View 4

Existing Condition

Figure 2-25 provides a detailed map of the locations of Key Viewpoints 3 and 4 within the Suburban Residential Landscape Unit in the City of Rancho Cucamonga. Key Viewpoint 4 is from the Pacific Electric Trail, looking east. **Figure 2-25** provides a photograph of an existing view of the project corridor at Key Viewpoint 4 from a Neighbor - Recreationists viewer perspective. The aerial background of the map of Key Viewpoints 3 and 4 shows the residential neighborhoods and areas of open space and recreation that are on both sides of I-15 in this landscape unit. The existing visual quality of Key Viewpoints 4 of the Suburban Residential Landscape Unit is moderate-high.

To provide a Neighbor - Recreationists viewer's perspective of the I-15 CP, **Figure 2-27** shows existing conditions photograph and a photo-simulation of the Build Alternative from the Pacific Electric Trail looking east as it crosses under I-15, just east of Key Viewpoint 4. This simulation shows:

- New decking between the existing northbound and southbound I-15 bridges at approximately the same height; and
- New columns with the same aesthetic design treatment at the south and north end of the new decking.

**Figure 2-27. Pacific Electric Trail Under I-15, Existing Condition and Proposed Conditions
(Key View 4)**



Existing conditions photograph. Taken from the Pacific Electric Trail under I-15, looking east



Photo-simulation condition of the Pacific Electric Trail under I-15, looking east

Source: I-15 CP Visual Impact Assessment, May 2017.

Resource Change

Enclosing the decking above the trail would be most visible as a Neighbor - Recreationist is traveling under I-15, where it would be noticeable that the size of the overhead structure has been increased. As bicyclists or pedestrians approach I-15 along the trail, this change would be barely visible. While the new structure between the northbound and southbound freeways will cover the trail, the freeway bridge is of sufficient height, and the overall width of the combined structures is sufficiently limited so that the trail will still experience substantial natural light during daytime, and the performance of existing night lighting that is already installed along the trail at approximately 150 foot intervals, will not be impacted. Crossing under I-15 on the Pacific Electric Trail would be expected to be a short distance, and for a brief duration, of a Neighbor - Recreationist viewer's total trip and visual experience. Overall, in this location at Key Viewpoint 4, the project would have a low visual resource change.

Viewer Response

Viewers in the Neighbor - Recreationists viewer group are considered to have a moderate-high response to changes in the visual environment.

Visual Impact

With a low level of resource change and a moderate-high viewer response the Build Alternative would be expected to have a moderate visual impact in this location.

Suburban Residential Landscape Unit- Special Boulevards

Existing Condition

The project would have similar visual changes at Foothill Boulevard and Baseline Road, which are within the Suburban Residential Landscape Unit and have been identified as Special Boulevards by the City of Rancho Cucamonga. Foothill Boulevard is also identified as a Historic/Special Design Street by the City of Rancho Cucamonga and as a Theme Corridor with the City of Fontana for its automotive history. As noted in the discussion of Key Viewpoint 3, Etiwanda Avenue is also designated as a Historic/Special Design Street by the City of Rancho Cucamonga.

Resource Change

Where the project area crosses these three roadways the visual resource change would be limited to new decking and structural columns to support the new overhead decking. The new columns, together with the new decking, would have a low visual resource change.

Viewer Response

These roads would be driven by viewers in the Neighbor - Motorists (Local Roads) viewer group and viewer type, who are considered to have a moderate-low response to changes in the visual environment.

Visual Impact

As shown in **Table 2-53**, with a low level of resource change and a moderate-low viewer response the project would be expected to have a moderate-low visual impact to these scenic roadways.

Suburban Residential Landscape Unit - Classified Landscaped Freeway

Two segments of I-15 within the project area are Classified Landscaped Freeways according to the list published by Caltrans on October 24, 2016. One of the segments from Post Mile 5.27 to Post Mile 5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue undercrossing) is located entirely within the Suburban Residential Landscape Unit. For most of this Classified Landscaped Freeway segment (between Post Mile 5.27 and 5.71, for a length of approximately 3,350 feet), the Build Alternative proposes to widen to the outside of the I-15 roadway and would disturb the existing vegetation/landscaping, which includes mature trees. The landscaping that is disturbed by the Build Alternative would be replaced within the same general location to maintain the Classified Landscaped Freeway designation.

The second segment of Classified Landscaped Freeway begins at Post Mile 7.56, which is just south of the SR-210 and I-15 interchange, and extends to Post Mile 10.11, north of the Summit Avenue overcrossing. The southern portion of this Classified Landscaped Freeway segment is also within the Suburban Residential Landscape Unit. The Build Alternative would not widen I-15 to the outside of the existing roadway within this Classified Landscaped Freeway segment. Therefore, the Build Alternative would not affect existing vegetation and would not impact the Classified Landscaped Freeway designation of this segment.

Agri-Open Landscape Unit

Existing Condition

Figure 2-28 provides a detailed map of the location of Key Viewpoint 5 within the Agri-Open Landscape Unit, which is on I-15 heading south, north of SR-210 on the border between the cities of Rancho Cucamonga and Fontana. This figure also provides a photograph of the existing view of the project area from the perspective of a viewer in the Highway Users viewer group in this location. The aerial background of the map of Key Viewpoint 5 shows the visual character of the project corridor in this location, which includes the wide linear element of I-15 and the adjacent open, undeveloped land. The existing visual quality of Key Viewpoint 5 and the Agri-Open Landscape Unit is moderately-high.

Resource Change

Similar to Key Viewpoint 1, in this location at Key Viewpoint 5, the Build Alternative would include adding Express Lanes that would be at the same grade as the existing roadway and would not block or alter scenic views or change the existing visual pattern. This would maintain the existing unimpeded views of the San Gabriel and San Bernardino mountains and the Jurupa Hills that are noted in the City of Fontana's community design vision.

Figure 2-28. Key Viewpoint 5 - Map and Photograph of the Existing View



Source: I-15 CP Visual Impact Assessment, May 2017.

The City of Rancho Cucamonga General Plan identifies SR-210 as a designated view corridor. SR-210 crosses above I-15; therefore, the proposed project would not block or alter views from SR-210 as experienced by motorists. Because the visible features of the project would be in keeping with the existing visual character and visual quality, the visual resource change would be low. In addition, the Build Alternative would enhance the existing transportation system and efficiency. This would be consistent with the goals and policies of the local communities in the corridor and would reduce the visual distraction of traffic congestion, thereby improving the visual quality along I-15 for the Highway Users viewer group.

Viewer Response

It is anticipated that the low visual resource change from the proposed project would be according to the viewer group's expectations of the I-15 visual environment. Highway Users viewers are considered to have a moderate-low response to changes in the visual environment.

Visual Impact

With a low level of resource change and a moderate-low viewer response, the Build Alternative would have a moderate-low visual impact on the views within the Agri-Open Landscape Unit.

Classified Landscaped Freeway

As discussed in the Regulatory Setting section, two segments of I-15 within the project area are Classified Landscaped Freeways, according to list published by Caltrans on the October 24, 2016. One of the segments is from Post Mile 5.27 to Post Mile 5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue undercrossing). The second segment of Classified Landscaped Freeway begins at Post Mile 7.56, which is just south of the SR-210 and I-15 interchange, and extends to Post Mile 10.11, north of the Summit Avenue overcrossing. The portion of this Classified Landscaped Freeway segment north of SR-210 is within the Agri-Open Landscape Unit. Within the Agri-Open Landscape Unit, and for the entire length of this Classified Landscaped Freeway segment, the Build Alternative would not widen I-15 to the outside of the existing roadway where the existing vegetation is located. Therefore, the Build Alternative would not affect this Classified Landscaped Freeway designation.

Light and Glare

In the long term, the Build Alternative would not add new street lighting to the I-15 roadway. New soffit lighting would be provided under the new bridge decking, which would provide needed visibility for pedestrian safety during evening and nighttime hours. This lighting would be directed downward toward the street, which would minimize the amount of light spilling into areas adjacent to I-15. The additional metal signs and metal posts could potentially increase glare within the corridor. However, the additional signs would be compatible with the existing signs and are anticipated to have minimal change in the light and glare conditions on the freeway. In addition, the tolling signs would provide needed wayfinding and toll information that would be important for driver's safety and awareness, and for the efficient use of the Express Lanes. The Build Alternative would not result in substantial adverse effect due to light and glare.

As discussed above, the Build Alternative would have moderate-low visual impacts within the Industrial, Office-Retail and Agri-Open Landscape Units, and a moderate visual impact on the Suburban Residential Landscape Unit. See **Table 2-54** for a summary of key view visual impact analysis. It is anticipated that the Build Alternative would have an overall moderate-low direct visual impact within the project corridor.

Table 2-54. Summary of Key View Ratings

Landscape Unit	Key View	Resource Change	Viewer Response	Visual Impact
Industrial	1	L	ML	ML
Office-Retail	2	L	ML	ML
Suburban Residential	3	M	H	MH
Suburban Residential	4	L	MH	M
Suburban Residential	SD	L	ML	ML
Agri-Open Landscape	5	L	ML	ML
Notes: Low – L; Moderate – M; Moderately Low – ML; Moderately High – MH; High – H; Special Designation (Foothill Boulevard and Baseline Road) – SD Source: <i>I-15 CP Visual Impact Assessment</i> , May 2017.				

The Build Alternative would not change the existing visual pattern and esthetics of the project area. The existing visual character of I-15 and adjacent land uses and structures would remain unchanged, as would existing views of the surrounding scenic resources and distant vistas.

The Build Alternative would not change the existing pattern of the built and natural landscape within the project area. The Build Alternative would widen the freeway mostly by adding to the existing paved median. Widening the roadway would increase the scale of the interstate. However, even in locations where the existing paved roadway would be widened, this widening would occur entirely within the existing interstate right of way, which would not affect the overall scale of the interstate. The proposed Build Alternative would be compatible with the existing project area; it would follow the existing horizontal alignment (the curves and straightness) and the slope of the vertical profile of I-15. The Build Alternative would enhance the continuity of I-15 because it would repave and restripe the entire width of the highway with uniform material, texture and color.

The Build Alternative would add low retaining walls, which would be new structural elements, and expand existing bridge structures (with additional structural columns). The low retaining walls would be located where I-15 would be widened into the currently unpaved right of way. The expansion of existing bridge structures would enclose the small areas that are currently open between the NB and SB directions of travel. The Build Alternative would not construct any new large structures, or structures above the current elevation of the interstate that would obstruct existing views or be visually dominant/prominent within the project area.

The Build Alternative would add new signage and sign poles, increasing the number of these visually encroaching features along I-15. However, freeway signage is an expected visual element in an interstate environment and provides important travel and wayfinding information; therefore, it would not affect the existing visual order in the project area. The new signage would be aesthetically similar (in scale, form and materials) to existing signs along the interstate.

Avoidance or minimization measures have been identified and can minimize visual impacts caused by the project. Measures would be designed and implemented with the concurrence of the District Landscape Architect. The recommended project measures would also reduce the temporary visual impacts of the Build Alternative during construction. Implementation of the measures would further minimize impacts to visual resources. Based on the evaluation above, the change in the visual character of the project corridor as a result of the proposed Build Alternative would be considered minimal.

2.1.10.5 Avoidance, Minimization, and/or Mitigation Measures

The following measures to avoid or minimize visual impacts will be incorporated into the project:

- VA-1** Retain as much vegetation as possible, particularly the mature trees that are between the highway and adjacent land uses.
- VA-2** Where feasible, set up construction staging areas in locations that are out of sight from a majority of viewers.
- VA-3** Shield construction lighting and/or focus lighting on work areas to minimize ambient spillover into adjacent areas.
- VA-4** Survey and document the existing visual character of construction staging areas prior to construction and restore construction staging areas to pre-project conditions once construction is complete.
- VA-5** Contour cuts and fills to visually blend with the surrounding landscape to the full extent possible.
- VA-6** Apply a consistent color and aesthetic treatment, like texturizing and scoring, to new structures such as soundwalls, retaining walls, medians, or bridge abutments to facilitate a common visual theme with other highway structures in the project area.
- VA-7** To the extent possible, apply a consistent landscape treatment throughout the project area to promote visual continuity. Landscape plantings should be consistent with the existing landscape within the project area. Supplemental water will be needed during the plant establishment period. The replacement ratio to be determined by the District Landscape Architect.
- VA-8** Replace disturbed landscaping Classified Landscaped Freeway segments within the project limits to maintain the designation.
- VA-9** Provide new soffit lighting under the new bridge decking to provide needed visibility for pedestrian safety during evening and nighttime hours.
- VA-10** Vine plantings with irrigation on one or both sides of soundwalls must be included wherever feasible (given Caltrans setback and maintenance requirements). If vines

can only be planted on one side of the wall, vine portals will be included in the wall design to accommodate vine access to both sides of the wall.

2.1.11 Cultural Resources

2.1.11.1 Regulatory Setting

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

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

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. The ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights of way. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)⁴ between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

2.1.11.2 Affected Environment

Information used in this section is based on the June 2017 *Archaeological Survey Report* and the June 2017 *Historic Property Survey Report*.

Methods of Analysis

A cultural resources literature and records search, a review of the California Native American Heritage Commission's (NAHC) Sacred Lands File, Native American consultation, and a field survey were conducted. These efforts are detailed below.

Literature and Records Search

On May 8, 2015, a records search was conducted at the Eastern Information Center (EIC) located at the University of California, Riverside. In addition, a records search was conducted at the San Bernardino Archaeological Information Center, located at the San Bernardino County Museum (SBCM), on May 12 and 13, 2015. These are branches of the California Historical Resources Information System (CHRIS), which maintains California's official records of previously recorded cultural resource studies and recorded archaeological sites, including the records for Riverside and San Bernardino counties. The EIC and SBCM records searches included the project area and a one-mile buffer surrounding the project area.

The records searches included a review of all available cultural resources surveys and excavation reports and site records within the project area and within a one-mile radius of the project. In addition, the following resources were consulted:

- National Register of Historic Places (NRHP) listings;
- California Register of Historical Resources (CRHR) listings;
- California Historical Landmarks;
- California Points of Historical Interest;
- Inventory of Historic Structures (California Office of Historic Preservation); and
- Points of Historical Interest.

The review of the EIC's and SBCM's records indicates that 130 previous cultural resources studies have been conducted within a one-mile radius of the project. Of these, 22 studies included the project area. Most studies observed no prehistoric or historic archaeological resources or isolated artifacts.

⁴ The MOU is located on the SER at http://www.dot.ca.gov/ser/vol2/5024mou_15.pdf

Fifty-seven cultural resources were recorded within a one-mile radius of the project. These sites include prehistoric sites and historic-era built resources. Prehistoric sites include at least one food processing site and a stone circle. Historic-era built resources include a winery, mining features, residences, farms, power lines, a sewer, flood control structures, and water storage features. The results of the records searches indicate that none of the identified archaeological sites are listed on the Archaeological Determinations of Eligibility (DOE) list; that is, none of the archaeological sites have been determined eligible for the NRHP or CRHR. Three previously recorded built resources are located within the project area, and these are discussed in more detail in the subsection “Cultural Resources within the APE” below.

Native American Consultation

Native American Heritage Commission

The California NAHC was contacted regarding the proposed project. Its response letter stated that a search of its Sacred Lands Database did not yield any sacred lands or traditional cultural properties in the project area.

Native American Communications

On February 17, 2016, letters describing the proposed project were sent to the following six Native American tribal representatives:

- Sam Dunlap, Gabrielino/Tongva Nation
- Mark Macarro, Pechanga Band of Luiseno Indians
- Rosemary Morillo, Soboba Band of Luiseno Indians
- Andrew Salas, Gabrielino Band of Mission Indians-Kizh Nation
- Lynn Valbuena, San Manuel Band of Mission Indians
- Goldie Walker, Serrano Nation of Mission Indians

Two responses to the letters were received. Joseph Ontiveros, Cultural Resources Director of the Soboba Band of Luiseno Indians, responded on March 17, 2016. Mr. Ontiveros indicated that the Soboba Band had no specific concerns about the project, but requested Native American monitoring during ground disturbance and archaeological work. The Soboba Band also deferred to the San Manuel Band for this project. Caltrans responded by letter to Mr. Ontiveros on April 5, 2017. This letter cited the Gary Winters (2003) memo and stated that Caltrans does not support Native American monitoring for this project.

Andrew Salas, Chairperson of the Gabrielino Band of Mission Indians-Kizh Nation, replied by letter on February 29, 2016. Mr. Salas indicated the areas was sensitive for his tribe, and requested that a Native American monitor be on-site during all ground-disturbing activities to protect cultural resources that might be discovered during construction. Caltrans responded by letter to Mr. Salas on April 5, 2017. This letter cited the Gary Winters (2003) memo and stated that Caltrans does not support Native American monitoring for this project.

Telephone calls were made on November 30, 2016, to the Native American tribal representatives who had not responded to the letter. Messages were left with these representatives requesting a response if they had comments or concerns regarding the project.

Consultation with Local Government

On February 26, 2016, a letter and map set were sent to local government agencies that may have knowledge of or concerns about historic properties in the area. The letter requested information regarding any known historic buildings, districts, sites, objects, or archaeological sites of significance within the project area; the letter was sent to the parties listed below.

- City of Riverside Cultural Heritage Board
- Eastvale Planning Department
- Fontana Planning Commission
- Jurupa Valley Planning Commission
- Ontario Historic Preservation Commission
- Rancho Cucamonga Planning Commission
- Riverside County Planning Department
- San Bernardino County Planning Commission

Follow-up phone calls were made to the interested parties on March 28 and 30, 2016.

- The Riverside County Planning Department responded on March 31, 2016, stating that it was not aware of any cultural resources in the project area.
- The San Bernardino County Planning Commission also responded on March 31, 2016, asking for an additional copy of the public participation letter; the commission will consult internally to see if its members are aware of any cultural resources in the project area.
- On May 11, 2016, Dat Tran, a planner for the City of Rancho Cucamonga, inquired about the distance between the I-15 right-of-way and a local historical resource, 7567 Etiwanda Avenue, which is two parcels outside of the APE. After a follow-up phone conversation, Mr. Tran expressed concerns on May 19, 2016, emphasizing that “stringent dust-control and construction vibration-reduction techniques should be employed to prevent any potential damage to the house during the course of construction.”

Response: On May 20, 2016, Mr. Tran was informed there is negligible potential for fugitive dust to reach the historical resource at 7567 Etiwanda Avenue. The historic site is more than 500 feet away from the proposed improvements on I-15. No pavement widening is proposed in this section of I-15 starting just north of Foothill Boulevard. Only lane striping changes are proposed for the addition of Express Lanes in the median. Localized foundation and sign structure installation will be required at certain locations, which will be determined during final design. Additional utility trenching may also occur within the existing Caltrans right of way. Standard construction best practices will be implemented during construction ensuring the historic property at 7567 Etiwanda Avenue in Rancho Cucamonga would not be affected by dust and other potential indirect effects. Hence this property need not be included in the APE.

Consultation with Historical Societies and Other Interested Parties

On February 26, 2016, a letter and map set were sent to consulting and interested parties who may have knowledge of or concerns about historic properties in the area. The letter requested information regarding any known historic buildings, districts, sites, objects, or archaeological sites of significance within the project area; the letter was sent to all of the recipients listed below.

- California Historic Route 66 Association
- California Historical Society
- California Route 66 Preservation Foundation
- Chinese Historical Society of Southern California
- Etiwanda Historical Society
- Fontana Historical Society
- Historic Resources Management Program
- Historical Society, Chino Valley
- Historical Society of Pomona Valley
- John Rains House
- Jurupa Mountain Cultural Center
- Mission Inn Museum and Foundation
- Museum of History and Art, Ontario
- Ontario Heritage
- Orange Empire Railway Museum
- Riverside Historical Society
- Riverside Land Conservancy
- Riverside Metropolitan Museum
- San Bernardino County Museum
- San Bernardino Historical and Pioneer Society

- Sherman Indian Museum
- Sweeney Art Gallery

Follow-up phone calls were made to the interested parties on March 28 and 30, 2016, and the verbal discussions are summarized as follows.

- The California Route 66 Preservation Foundation responded by telephone, saying that it did not believe the proposed project would have an impact on Route 66.
- Kevin Hallaran at the Riverside Metropolitan Museum said via telephone he was not aware of any specific resources near the project area but recommended looking for dairies, wineries, or remnants of the sort because they were common property types in the area before they were replaced with newer construction.
- Jack Easton of the Riverside Land Conservancy called on March 31, 2016, to state via telephone that the conservancy was not aware of any historic resources in the project area.

Field Survey

Existing Conditions

The project is located in both Riverside and San Bernardino counties, Township 1 and 2 South and Range 5 and 6 West, San Bernardino Base and Meridian. In the northern portion of the project area, in the communities of Fontana, Ontario, and Rancho Cucamonga, the area surrounding the project is intensively developed with residences and commercial and industrial buildings; there is no undeveloped land. In the southern portion of the project area, in the communities of Eastvale and Jurupa Valley, an intensively developed area with housing tracts exists, with some rural, undeveloped land.

The project is crossed by Lytle Creek and East Etiwanda Creek. The active channels of these streams, especially Lytle Creek, are inset into extensive older alluvial terrace and fan deposits. Because of this geological setting, the project area is underlain by deep alluvial sediment composed of gravel, sand, and silt. Given the alluvial setting, the potential exists for recent alluvium to have buried prehistoric sites. Within the project area, the surface soils, consisting of fill, are disturbed. However, native soils may be encountered below previously disturbed surface soils and existing fill. Native soils have the potential to contain buried archaeological deposits.

The entire surface of the right of way has been previously disturbed, and the majority of improvements would occur within areas with existing fill. At specific locations for borings and potential pile locations, vertical disturbance may be up to 100 feet below the existing grade.

Survey Effort

A cultural resources survey of the project area was conducted on December 4, 2015, in compliance with Section 106 of the NHPA. The project area consists of the interstate travelled way, east and west edges, on-ramps and off-ramps, staging areas, and a minor modern buildout directly adjacent to I-15. Where accessible and safe, within on-ramps and off-ramps, staging areas, and the minor modern buildout, a pedestrian survey was conducted in three-meter transects. Surface visibility was poor because of heavy disturbance from construction of the interstate and adjacent industrial lots. Therefore, most of the survey consisted of a visual survey.

No newly identified cultural resources were identified during the field survey. It was noted that the center medians and edges of the interstate had been graded, and in some cases, landscaped. As mentioned above, these areas of heavy disturbance were not surveyed on foot, but by automobile because the natural ground surface had been removed and/or heavily disturbed.

The field survey confirmed that the ground surface within the entire project area has been heavily disturbed through construction of the highway and associated structures, agricultural properties, and industrial properties adjacent to the right of way.

Area of Potential Effects (APE)

In accordance with Section 106 Programmatic Agreement Stipulation VIII.A, the Area of Potential Effects (APE) for the proposed project was established in consultation with Andrew Walters, principal architectural historian, and Raghuram Radhakrishnan, project manager/local assistance engineer, on June 22, 2017.

The APE was established as the limits of proposed construction, including the limits of the current and proposed rights-of-way, temporary construction easements, an adequate buffer so heavy equipment can maneuver, and staging areas. The project APE encompasses areas with potential direct impacts related to construction (i.e., the Area of Direct Impact, as shown in project plans) and a buffer zone for potential impacts on the adjacent built environment that may extend outside the project footprint, such as visual, noise, vibration, dust, and access.

The proposed project would not include permanent partial or full property acquisitions and therefore would not require relocation of residences and/or businesses. The horizontal extent of ground-disturbing activities would be limited to the Caltrans right-of-way, which has been previously disturbed by construction of the highway. No new right-of-way is proposed.

In terms of the vertical APE, the entire surface of the Caltrans right-of-way has been previously disturbed, and the majority of improvements would occur within areas with existing fill. Boring locations are not known at this time, but the current APE covers potential locations of boring and pile driving sites and depth of borings and pile driving activities are anticipated to be up to 100 feet. Fill for widening would be between 5 to 25 feet depending on the height of the existing embankment. Depth of disturbance for everything not related to bridge footings would be 5 to 10 feet. Gantry footings would have a depth of approximately 7 feet. Bridge footings would require piles as deep as 70 feet, and potentially up to 100 feet.

Cultural Resources within the APE

No specific tribal resources were identified within the APE through the tribal consultation effort. No previously recorded archaeological resources are located within the project area. Three previously recorded built resources are located within the project area, as follows:

1. The portion of historic Route 66 (P-36-002910, currently Foothill Boulevard) in the APE was evaluated by Caltrans in 2003 and found to be ineligible for listing in the NRHP or CRHR.
2. The Summit Avenue Ditch is a canal or water conveyance feature (see Attachment C to the Historic Property Survey Report [HPSR], the Archaeological Survey Report [ASR], for references; Sutton 1991a and 1991b). The integrity of this resource, which is in the vicinity of

I-15, was listed as “poor” by the Caltrans archaeologist (Sutton 1991a). A copy of the site record for P-36-006901 is included in Appendix 2 of the ASR (Attachment C to the HPSR). P-36-006901 was visually observed, not surveyed on foot. Its condition appeared unaltered from its previous recording. Although this resource has not been formally evaluated for listing in either the NRHP or CRHR, its poor integrity means it would be exempt from evaluation under Attachment 4 of the Section 106 Programmatic Agreement as a “property type 6.”

3. On May 5, 2016, the National Park Service (NPS) provided information that the Old Spanish Trail once crossed the project area. This resource is no longer extant in the project area. Based on electronic shape files provided by NPS and Bureau of Land Management (BLM) maps from 2006, the Old Spanish National Trail Northern route crossed the I-15 as shown in **Figure 2-29**. The crossing was 0.125 miles south of East Jurupa Street located between Milliken Avenue and South Etiwanda Avenue in Ontario. Additional research was conducted to confirm that this resource is no longer present. This research consisted of consulting the following maps: 1954 Map of the Old Spanish Trail (provided by the Seaver Center for Western History) and the 1938 Map of Spanish, Mexican, and Early American Historic Sites, Highways, and Battlefields in Los Angeles County (provided by the Los Angeles County History Department). At this location, the setting has been altered by new construction within the urban landscape. Additionally, based on a reconnaissance survey of the entire project APE, the trail is no longer present within the APE because of ground disturbance resulting from the construction of I-15.

2.1.11.3 Environmental Consequences

None of the portions of the three cultural resources located in the APE were found eligible under CRHR or NRHP; therefore, there will be no temporary or permanent impacts as a result of the No Build Alternative or the Build Alternative. The anticipated Section 106 finding for the project as a whole is “no historic properties affected.”

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

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 Andrew Walters, Branch Chief, Environmental Support – Cultural Studies, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Figure 2-29. Approximate Location of Where the Old Spanish Trail Crossed the Area of Potential Effects



Source: NPS and ICF, 2017.

No consultation with the State Historic Preservation Officer (SHPO) was undertaken for the proposed project because no historic properties were affected in the APE. Under the Caltrans Section 106 PA, many steps in the Section 106 process are delegated to Caltrans. Caltrans only consults with SHPO on determinations of eligible and higher level findings of effect. Per PA Stipulation IX.A Caltrans made the finding of NHPA for the undertaking. No Section 4(f) resource types that are historic sites are within the APE or in the project vicinity.

2.1.11.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

2.2.1.1 Regulatory Setting

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

To comply, the following must be analyzed:

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

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

2.2.1.2 Affected Environment

The primary source used in preparing this section is the July 2016 *Location Hydraulic Study*. The project is located within the Santa Ana River watershed. The corridor’s southern portion lies within the Chino Basin alluvial plain. The northern portion is located within the Lytle Creek alluvial fan of the San Gabriel Mountains. Topography slopes down generally gently from the north to the south end of this alignment toward the Santa Ana River. The elevation within the project area extends from the southern end at a low elevation of approximately 740 feet, to the northern end at a high elevation of approximately 1,740 feet. The climate is generally semi-arid with mild winters and hot summers. Most of the rainfall occurs during winter and early spring, with precipitation of approximately 12 inches per year.

A review of the Flood Insurance Rate Maps (FIRMs) for San Bernardino County indicated that there are 100-year and 500-year floodplains associated with the Etiwanda Creek Channel, San Sevaine Wash, and Day Creek Channel. Floodplains are primarily located adjacent to the project alignment in the City of Ontario, in the northeastern portion of the City of Rancho Cucamonga, and in the northern portion of the City of Fontana. (See **Figure 2-30** for the location of various floodplain zones.) FEMA defines these flood zones as the following:

- Zone X—Area determined to be outside the 0.2-percent annual chance flood.
- Zone D —Areas of 0.2-percent annual chance flood; areas of 1-percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile and areas protected by levees from the 1-percent annual chance flood.
- Zone A—Special flood hazard area subject to inundation by the 1-percent annual chance flood event; no base flood elevations determined.
- Zone AE—Special flood hazard area subject to inundation by the 1-percent annual

The characteristics of the six flood areas in the project's general area were evaluated and are described below. (See **Figure 2-31.**)

1. Riverside Basin

Located north of the intersection of I-15 and SR-60, and south of Philadelphia, the Riverside Basin is approximately 50 acres and falls within FIRM Panels 06065C0018G and 06071C8641H. The Riverside Basin receives flow from the Day Creek Channel. The area immediately surrounding the basin (south of Philadelphia Street, north of SR-60 and east of I-15) is a 1 percent Special Flood Hazard Area (SFHA) Zone A. The rest of the area adjacent to the intersection of I-15 and SR-60 is a low-risk flood area.

2. Wineville Basin

Located east of I-15 and south of Jurupa Street, Wineville Basin is approximately 60 acres and corresponds to FIRM Panel 06071C8641H. The area immediately surrounding the basin is a 1 percent SFHA Zone A. The rest of the area adjacent to I-15 is a 0.2 percent Flood Hazard Area Zone X.

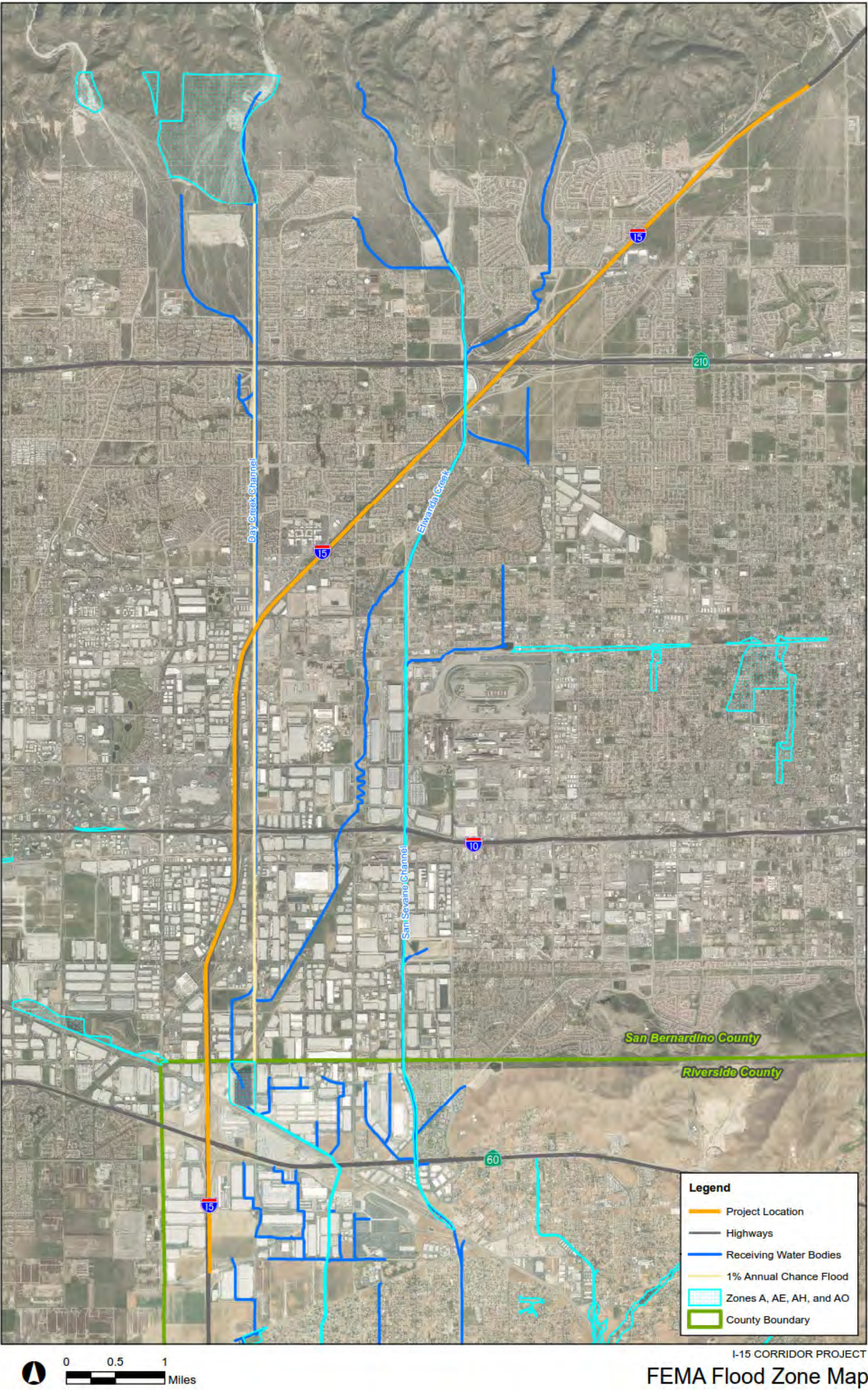
3. East Etiwanda Channel/Creek

The Etiwanda Channel originates north of I-15 at the base of the San Gabriel Mountains. Etiwanda Channel flows southerly via a partially improved channel to a location approximately 2,500 feet and continues under the I-15 via a box culvert. South of the I-15 freeway, Etiwanda Channel is fully improved until East Foothill Boulevard. At East Foothill Boulevard, the Etiwanda Channel veers southwest, and combines with the San Sevaine Channel to form a single channel. From its origination to the location where it combines with San Sevaine Channel, the Etiwanda Channel is a 1 percent SFHA Zone AE. Portions of the channel are regulatory floodways in which flooding is contained within the channel. However, the areas adjacent to the channel are 0.2 percent Flood Hazard Zone X. This portion of Etiwanda Channel corresponds to FIRM Panels 06071C7895J and 06071C8635J.

East Etiwanda Creek begins at the southwest end of Etiwanda Creek Channel at East Avenue and East Foothill Boulevard. It runs parallel to East Airport Drive just south of I-10 and west of Etiwanda Avenue, where it merges into a concrete trap channel. This portion of East Etiwanda Creek is a 1 percent SFHA Zone A in which the flood discharge is contained in the channel. This segment of East Etiwanda Creek corresponds to FIRM Panels 06071C8634J, and 06071C8642J. East Etiwanda Creek continues to Lower Etiwanda Creek leading to Wineville Basin - FIRM Panel 06071C8641H.

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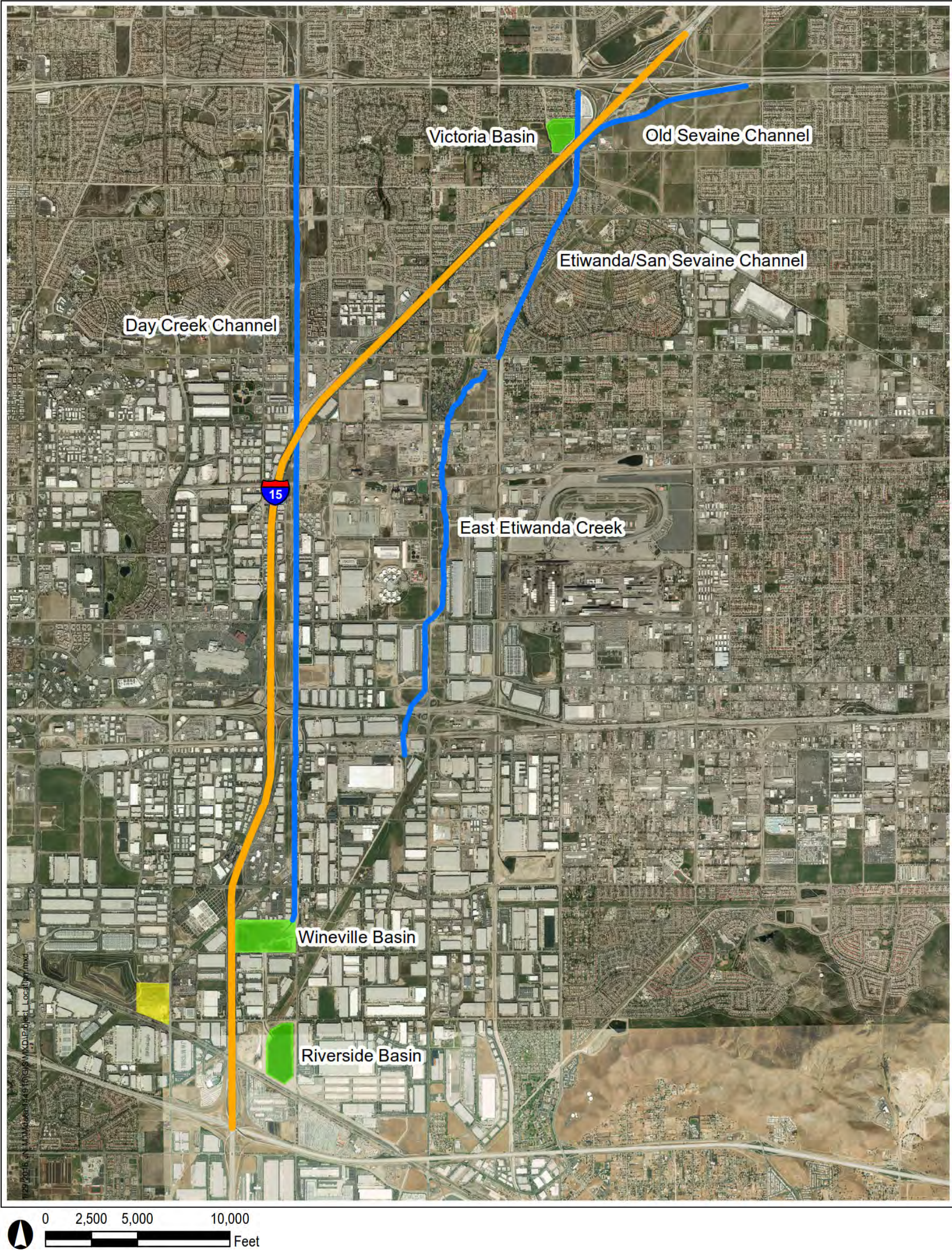
Figure 2-30. FEMA Flood Zone Map



Note: The I-15 CP is mostly within FEMA D and X Zones. The 100-year floodplains are shown on this exhibit. The 1-percent Annual Chance Flood Designation in Day Creek is contained in the channel.
Source: ESRI, Caltrans, FEMA. Prepared for the I-15 CP, March 2017.

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Figure 2-31. Location of Flood Study Areas



Source: I-15 CP Location Hydraulic Study, July 2016.

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4. Victoria Basin

The Victoria recharge basin is located north of Victoria Street and west of I-15. It is on the western end of the Etiwanda channel and has approximately 235 acres of storage capacity.

Victoria Basin is a 1 percent SFHA Zone A and corresponds to FIRM panel 06071C7895J.

5. Old Sevaine Channel

Old Sevaine Channel also referred to as Highland Channel previously ran along Highland Avenue and then just west of Cherry Avenue, where it continues south to Victoria Street. However, that portion of Highland Channel no longer exists. Highland Channel was realigned to follow the intersection of SR-210 and I-15 and intersects with the existing San Sevaine Channel just north of Victoria Street. Old Sevaine Channel is a 1 percent SFHA Zone A and corresponds to FIRM Panel 06071C7915H.

6. Day Creek Channel

Day Creek Channel runs from north of SR-210 and east of Day Creek Boulevard to Wineville Basin. Day Creek is a 1 percent Flood Zone X in which the flood discharge is contained in the channel. It is a low to moderate risk area and corresponds to FIRM Panels 06071C8635J, 06071C8633H, and 06065C0016G.

2.2.1.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not change the existing physical environment; therefore, it is not anticipated to result in any temporary or permanent impacts to hydrology and floodplains.

Build Alternative

Temporary

Temporary construction activities may cause flooding that may affect traffic safety. During construction, measures would be implemented to minimize temporary impacts to public safety due to potential localized flooding. With the implementation of storm water temporary BMPs, it is anticipated that the project would not have flooding hazards. It is not anticipated that project construction activities would result in encroachment on floodplains, nor would they result in temporary impacts to hydrology and floodplains.

Permanent

The SFHAs identified for the impact analysis are a result of open channel flow or the flooding associated with runoff from a storm event. However, all floodplains within the project limits are contained within the boundaries of the channels or basins. Therefore, the areas adjacent to the channels and basins are considered of moderate risk areas from flooding. Within the flood basins and channels identified in the project study area, only two locations would be involved in the construction of the proposed improvements and were evaluated for potential hydraulic impacts. One is along Etiwanda Channel and San Sevaine Channel, just north of Victoria Street. The second is along Day Creek Channel, just south of Arrow Route.

The Etiwanda Creek Bridge is located along the Etiwanda and San Sevaine channels, just north of Victoria Street. The bridge structures consist of a pair of single spans that extend over the channel. One structure is dedicated to the NB lanes, and the second structure is for the SB lanes. The roadway widening in the median would result in the closure of the opening separating the NB and SB lanes, but maintains the bridge as a single-span structure. The bridge is supported by abutments along the sloped embankment and the improvement would not result in the addition of piers or restriction of the channel; therefore, impact to the hydraulics performance of the channel is not anticipated.

The Day Creek Bridge is also a pair of single-span structures over the channel. One structure is dedicated to the NB lanes, and the second for the SB lanes. The proposed bridge construction would result in closure of the opening separating the NB and SB lanes, but maintains the bridge as a single-span structure. This bridge is also supported by piers outside the boundary of the channel and the improvements would not result in the addition of piers or restriction of the channel; therefore, impact to the hydraulics performance of the channel is not anticipated.

According to the list of definitions as provided in 23 CFR 650.105, a longitudinal encroachment is defined as an encroachment that is parallel to the direction of flow. A transverse encroachment is an encroachment that is perpendicular or skewed to the direction of flow. Both bridges cross the channels diagonally, and therefore, they would not have the potential to cause longitudinal encroachment. The implementation of the proposed improvements is not expected to impact special flood hazard zones associated with the Day Creek Channel, Etiwanda Creek Channel or any other mapped floodplains. The project does not alter the existing flooding source, support incompatible floodplain development, or include improvements that encroach on flood zones. The project constitutes minimal encroachment on floodplains, and therefore, it is anticipated to have minimal risk to life and property, disruption of traffic, and risks to natural and beneficial floodplain values.

The project would not result in a significant encroachment in the 100-year floodplain.

2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.2.2 Water Quality and Storm Water Runoff

2.2.2.1 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 source⁵ 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

⁵ A point source is any discrete conveyance such as a pipe or a man-made ditch.

stormwater 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 WoUS to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. 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 Standard permits. There are two types of General permits: Regional permits and Nationwide permits. 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 Nationwide Permit may be permitted under one of the USACE’s Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA’s Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 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 effluent⁶ 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

⁶ The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

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 State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these 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; 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 are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollutant Discharge Elimination System (NPDES) Program**

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including 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. The Department's MS4 permit covers all Department rights of way, properties, facilities, and activities in the state. The SWRCB or

the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

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

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

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 Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

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

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

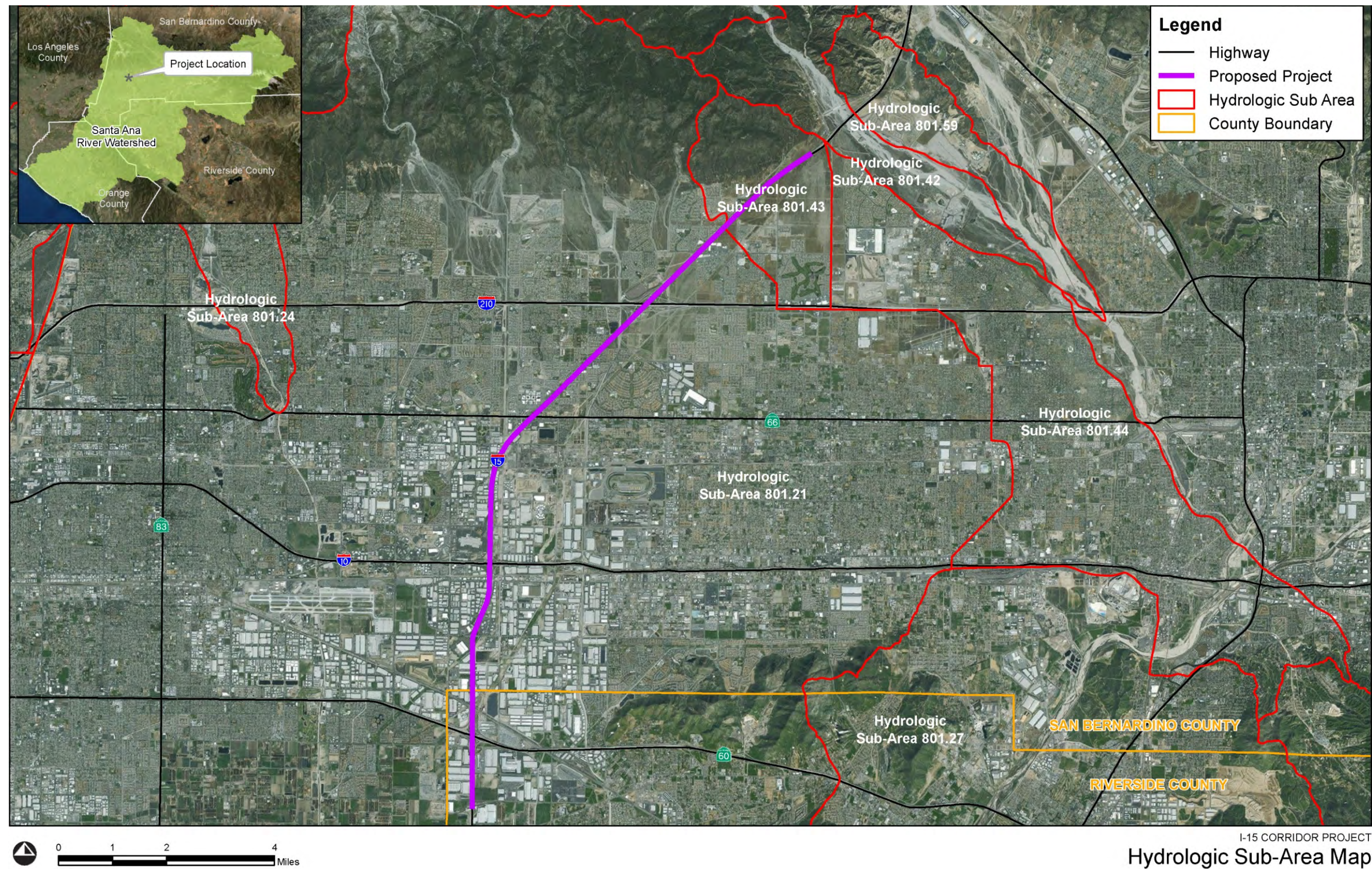
2.2.2.2 Affected Environment

The primary source used in preparing this section is the September 2017 *Scoping Questionnaire for Water Quality Issues*, as well as the January 2018 *Natural Environment Study Report* prepared for the project.

Regional Hydrology

The southern part of the proposed project below Summit Avenue is located in the Santa Ana River watershed within the Middle Santa Ana River Hydrologic Area and Hydrologic Sub-Area Chino (801.21). The northern part above Summit Avenue is in the Santa Ana River watershed within the Colton-Rialto Hydrologic Area and Hydrologic Sub-Area Rialto (801.43). **Figure 2-32** shows the location of downstream hydrological sub-areas in relation to the proposed project. Typically, the runoff flows indirectly into the Santa Ana River. However, a small portion of the project area crosses over Day Creek Channel, Etiwanda Creek Channel, or San Sevaine Channel prior to discharging into the Santa Ana River Reach 3. Water that enters these water bodies would flow into Wineville Basin, and through Day Creek Channel into Riverside Basin. If the Riverside Basin overflows, it would flow into Day Creek Channel until it confluences with Santa Ana River Reach 3 at the Goose Creek Golf Club in the City of Jurupa Valley. The runoff further drains southwest into Santa Ana River Reach 2 and Santa Ana River Reach 1 before finally discharging into the Pacific Ocean.

Figure 2-32. Hydrologic Sub-Area Map



Source: I-15 CP Scoping Questionnaire for Water Quality Issues, September 2017.

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Receiving Water Bodies

Within the SBCTA proposed project area boundary north of SR-60, drainage would be discharged east into the Day Creek Channel, Etiwanda Creek Channel, or San Sevaine Channel. For the proposed project area south of SR-60, storm water flows west through the local drainage network to Line E (per the Eastvale Master Drainage Plan). The receiving water bodies discharge into Santa Ana River Reach 3, which flows into Prado Basin. (See **Figure 2-33** for receiving waters locations).

According to the 2016 CWA Section 303(d) List, the primary receiving water bodies ((Day Creek Channel, Etiwanda Creek Channel, San Sevaine Channel, or Line E)) are not listed as impaired nor have TMDLs established for them. However, Santa Ana River Reach 3, which is downstream of the primary receiving water bodies, is on the 303(d) List, identified as being impaired for copper and lead, and has TMDLs for pathogens and nitrates that are being implemented.

According to the *Chino (Maximum Benefit), Rialto-Colton and Riverside Basins Management Zone Boundaries* map in the Santa Ana Region Basin Plan, this SBCTA project falls within the Rialto and Chino-North management zones.

Table 2-55 summarizes the beneficial uses of the receiving and downstream water bodies from the discharge of the proposed project to the ocean, as identified in the Santa Ana River Basin Plan. Additionally, the table provides the beneficial uses of the Ground Water Basin for this project.

Table 2-55. Beneficial Uses of Surface and Ground Waters

Water Body or Management Zone Name	MUN	AGR	IND	PROC	GWR	REC 1	REC 2	WARM	WILD	RARE
Surface Water Beneficial Uses										
Valley Reaches of Above Streams (Day Creek and Etiwanda Creek)	✓	-	-	-	✓	✓	✓	✓	✓	-
Santa Ana River Reach 3 – Prado Dam to Mission Blvd. in Riverside	-	✓	-	-	✓	✓	✓	✓	✓	✓
Santa Ana River Reach 2 – 17th Street in Santa Ana to Prado Dam	-	✓	-	-	✓	✓	✓	✓	✓	✓
Santa Ana River Reach 1 – Tidal Prism to 17th Street in Santa Ana	-	-	-	-	-	✓	✓	✓	✓	-
Ground Water Beneficial Uses										
Rialto	✓	✓	✓	✓	-	-	-	-	-	-
Chino-North “maximum benefit”	✓	✓	✓	✓	-	-	-	-	-	-
MUN	Municipal and Domestic Supply		REC 1		Water Contact Recreation					
AGR	Agriculture Supply		REC 2		Non-Contact Water Recreation					
IND	Industrial Service Supply		WARM		Warm Freshwater Habitat					
PROC	Industrial Process Supply		WILD		Wildlife Habitat					
GWR	Groundwater Recharge		RARE		Rare, Threatened, or Endangered Species					
Source: I-15 CP Scoping Questionnaire for Water Quality Issues, September 2017.										

Municipal or Domestic Water Supply Reservoirs or Percolation Facilities

There are drinking water reservoirs and recharge facilities located near the limits of the project that receive discharge from the project area. These facilities are the Victoria Basin, the Wineville Basin, and the San Sevaine basins 1 through 5 (See **Figure 2-33** above). Victoria Basin is located along I-15 (Post Mile 7.5) and owned by the San Bernardino County Flood Control District (District). Its sources include the East Etiwanda Creek Channel and Etiwanda Channel. The Victoria Basin is a percolation basin, which replenishes the groundwater by capturing storm water and returning it to the ground for future use. The second basin, Wineville Basin, is also located along I-15 (Post Miles 0.5 to 0.75) and is owned by the District. The San Sevaine basins 1 through 5 (Post Miles 8.3 to 9.5) have the potential to become percolation basins as proposed by the IEUA. The sources for Wineville Basin are Day Creek Channel and the Etiwanda Channel. Its purpose includes flood control and groundwater recharge, which is meant for irrigation, industrial, and municipal uses.

Groundwater Resources

The project is located within the Chino Groundwater Sub-basin of the Upper Santa Ana Valley Groundwater Basin. The Chino Sub-basin covers approximately 240 square miles (approximately 154,000 acres), and is bounded by the San Gabriel Mountains to the north, the Chino Hills to the west, and the Jurupa Hills to the south. The depth to groundwater within the project area ranges from 150 feet to 500 feet. Per the California Department of Water Resources Water Data Library, the nearest groundwater well with current groundwater level and quality data is located north of Baseline Avenue, near the intersection of the I-15 North on-ramp and Baseline Avenue, in the City of Fontana. The depth to groundwater at Well Number 341217N1175119W001 in October 2015 was approximately 581 feet. Overall, the depth to groundwater within the proposed project area ranges from 150 feet to 500 feet. (See **Figure 2-34**. Groundwater Basins).

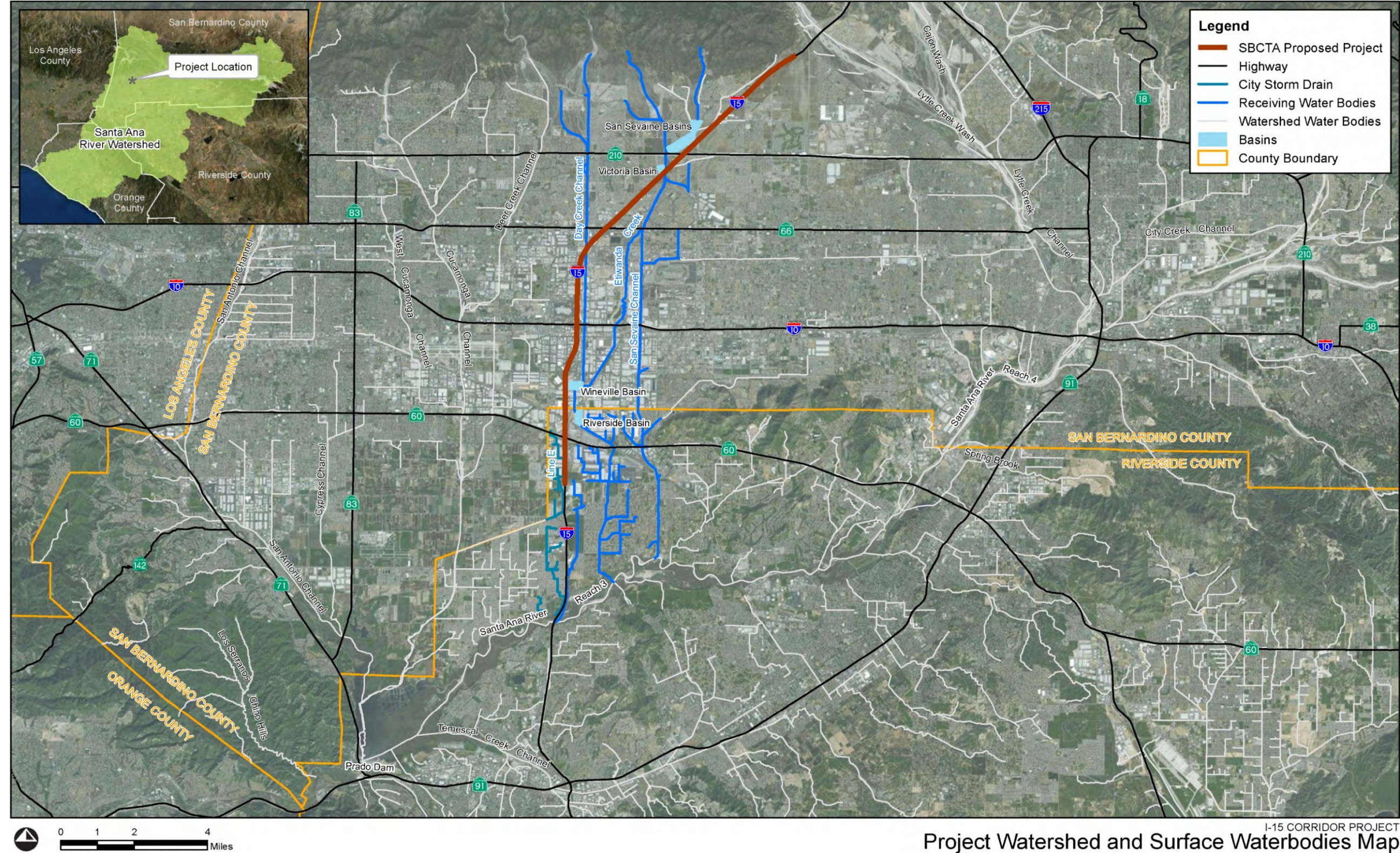
According to California's Groundwater Bulletin 118, groundwater in the Chino Sub-basin of the Upper Santa Ana Valley Groundwater Basin typically has high levels of calcium-sodium bicarbonate with a total dissolved solids concentration range of 200 milligrams per liter (mg/L) to 600 mg/L. Historical water quality data for station number Y212005 adjacent to the project limits was found and the latest sample results taken on May 8, 2007, are provided in **Table 2-56**.

Table 2-56. Groundwater Quality Results - Chino Station (Chino Sub-basin)

Analyte	Sample Result	Reporting Limit	Units	Method
Dissolved Calcium	49	1	mg/L	EPA 200.7
Dissolved Chloride	98	5	mg/L	EPA 300.0 28d Hold
Specific Conductance (EC)	899	1	µS/cm @ 25°C	Std Method 2510-B
Hardness	184	1	mg/L as CaCO ₃	Std Method 2340 B
Dissolved Magnesium	15	1	mg/L	EPA 200.7 (D)
Total Dissolved Solids	524	1	mg/L	Std Method 2540 C
Total Dissolved Solids	524	1	mg/L	Std Method 2540 C
Dissolved Sulfate	103	5	mg/L	EPA 300.0 28d Hold
Turbidity	3	1	N.T.U.	EPA 180.1

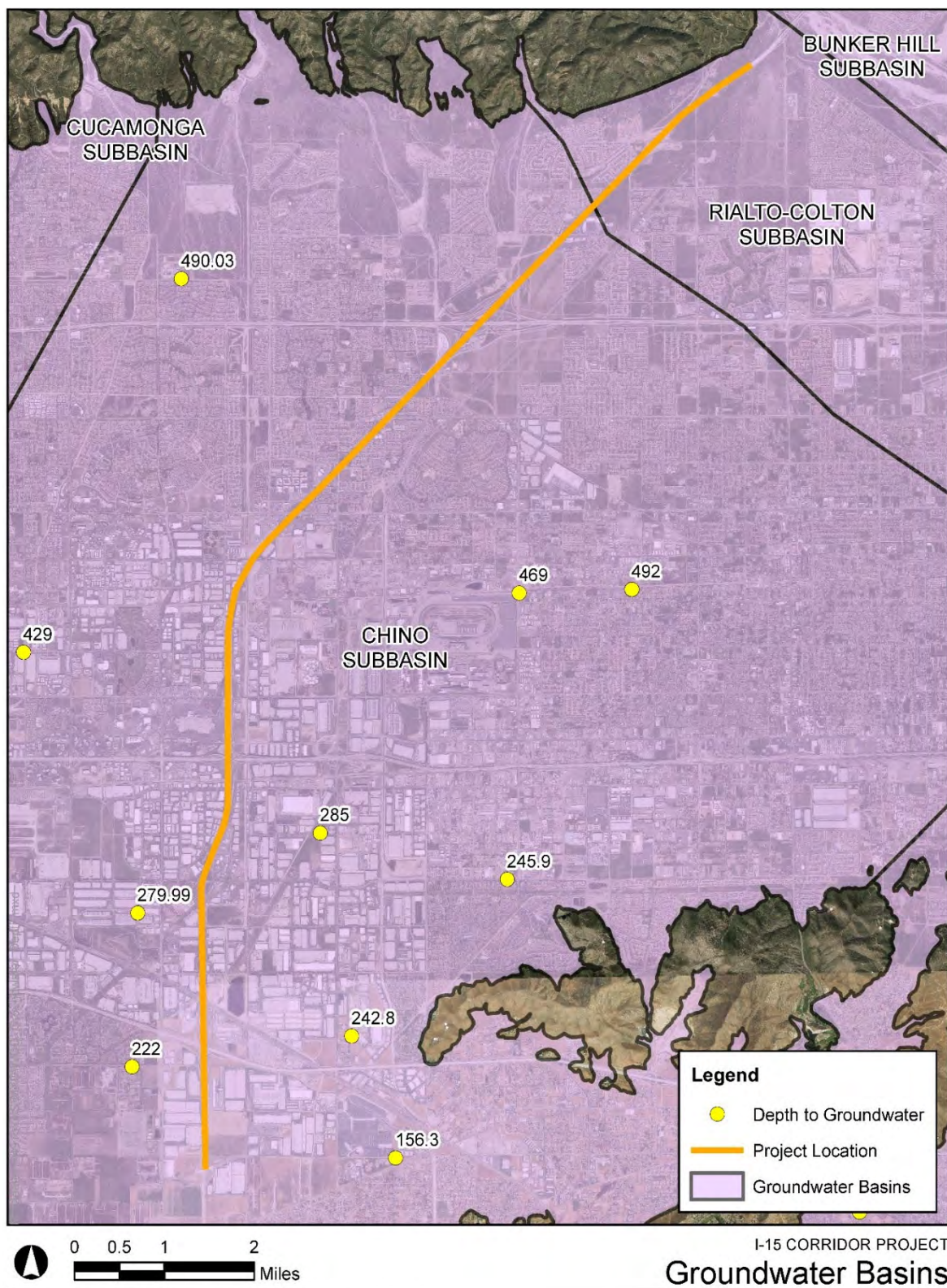
Source: I-15 CP Scoping Questionnaire for Water Quality Issues, September 2017.

Figure 2-33. Project Watershed and Surface Waterbodies Map



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Figure 2-34. Groundwater Basins



Source: ESRI, Caltrans, SWRQCB, Groundwater Information Center Interactive Map Application

Source: I-15 CP Scoping Questionnaire for Water Quality Issues, September 2017.

2.2.2.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not change the surface runoff levels, and would not change the existing conditions that would affect storm water runoff, and water quality. Future activities under the No Build Alternative would include routine maintenance of drainage facilities. There would be no impacts to water quality with the No Build Alternative.

Build Alternative

Temporary

Pollutants that may result from construction activities include sediments, trash, petroleum products, and other construction-related waste. Construction activities of the project including clearing and grubbing would result in an estimated 160 acres of total DSA. Disturbed soil area includes the new impervious areas where clearing or grubbing will occur, such as the unpaved median areas that will be paved and other lane or ramp modifications within the project limits. In general, soils within the proposed project are considered to have low to moderate potential for erosion, and is characterized by particles resistant to detachment. Disturbed soil and the removal of trees and vegetation would result in potential for increased soil erosion and transport by runoff into receiving waters. In addition, imported borrow would be used in the widening between the SR-60 and the county line. Staging, stockpiling, and/or storage areas would occur within the proposed project area, and would be placed as far away from water bodies as feasible. The project would be required to develop a SWPPP to identify measures that would address these impacts. With the implementation of SWPPP and NPDES general permits and requirements, it is not anticipated that the project would result in impacts on water quality due to construction activities.

Permanent

Surface Water

The proposed project would result in an increase in impervious area by approximately 66.5 acres that includes replaced and new impervious areas. **Table 2-57** summarizes the preliminary BMP treatment areas included in the proposed project. The discharge from the proposed project after construction would include the pollutants typically generated by a roadway, such as sediment, organic compounds (i.e., petroleum hydrocarbons), trash, bacteria, oil and grease, and metals. These pollutants have the potential to cause a nuisance or affect the beneficial uses of receiving water bodies (Day Creek Channel, Etiwanda Creek Channel, San Sevaine Channel, or Line E) downstream of the proposed project. To address this increase in impervious area, treatment BMPs are proposed within the project limits. The total post construction treatment BMPs is approximately 66.6 acres, or 100 percent of the required post-construction treatment area. The treatment BMPs are measures designed to remove pollutants from storm water runoff prior to discharging to receiving waters. The treatment BMPs recommended for this project would include Design Pollution Prevention (DPP) Infiltration Areas, Biofiltration Swales, and Biofiltration Strips as described in the Caltrans *Project Planning Design Guidance* (May 2016). Additional measures would include designing the project to avoid soil erosion from steep slopes through minimizing cut and fill areas. Retaining walls would be incorporated where 2:1 slopes cannot be accommodated, where proposed slopes are 4:1.

Table 2-57. Preliminary BMP Treatment Summary

Category	Approximate Treatment Area (acres)
Treatment of Net New Impervious Area with Retrofitting of Existing BMPs	5.7
Treatment by Proposed DPP Infiltration Areas	60.9
Total Treatment Area	66.5
Source: I-15 CP Scoping Questionnaire for Water Quality Issues, September 2017.	

A preliminary analysis of the existing drainage facilities was performed to determine if they can handle the increase in flow from the areas where an increase in impervious area is proposed. The Victoria and San Sevaire basins currently receive runoff from the existing area of the proposed project limits north of the SR-210 interchange. No proposed project-related increase in impervious surface is proposed within this area, and therefore, no increase in storm water runoff or associated pollutants are anticipated to be discharged to either the Victoria or San Sevaire basins. Wineville Basin is within the area where the increase in impervious surface is proposed, and located downstream of Day Creek Channel. The information from the July 2016 Preliminary Drainage Study Report prepared for the project indicates that the existing facilities are adequate to convey the 25-year design storm resulting from the proposed project.

The project runoff discharge would not result in the modification or otherwise altering the existing storm drain connections to the Flood Control Facilities. This information was documented in a technical memorandum and confirmed with the San Bernardino County Flood Control District (District). Coordination with the District would continue throughout the project development during the PA&ED, and following phases. Evaluation of the existing drainage system will be performed during the design-build phase to determine the need for culvert rehabilitations or replacements and inlet modifications. In the event that there are changes during the final design phase, a permit would be completed and submitted to the District, if required.

Groundwater

The proposed project would not affect domestic or municipal drinking water recharge facilities, or any other potential “high-risk” areas. According to the Caltrans District 8 Work Plan, Victoria Basin and the Wineville Basin are two drinking water reservoirs and ground water recharge facilities located near the proposed project limits. This project does not discharge to Victoria Basin; therefore, there would be no impact to this basin from the proposed improvements. The project does not directly discharge to Wineville Basin. The runoff from the proposed project is conveyed into Caltrans storm drain systems, then further into the City’s storm drain network prior to discharging into the Wineville Basin. There are no modifications required to these facilities due to this project. Additionally, the proposed impervious area from this project would be treated to the maximum extent possible by implementing treatment BMPs prior to discharge into storm drains. Therefore, it is anticipated that although these drinking water reservoirs and recharge facilities are identified in the District 8 Work Plan as “high-risk” areas, the project improvements would not have an impact on the basins.

Caltrans’ *Infiltration Basin Design Guidance* indicates that a separation of 10 feet between the seasonally high groundwater level and infiltration basin inverts is required (February 2011). Based on the information available, it is not reasonably expected that groundwater would be

affected by the proposed project because the depth to groundwater is from 150 feet to 500 feet as shown in **Figure 2-34** (Groundwater Basins) above. According to the June 2016 Initial Site Assessment Report developed for this project, it was determined that shallow groundwater conditions are not anticipated in the project area. A geotechnical study of the groundwater hydrology within the proposed project area would be conducted during the design-build phase to determine a more accurate groundwater depth. A Re-Evaluation will be completed prior to any related construction occurring if required based on the geotechnical study findings.

The project would result in the temporary removal of 0.35 acre of federal jurisdictional aquatic resources, and an additional 0.63 permanent acre and 0.93 temporary acres of RWQCB jurisdictional Waters of the State (WoS). The project would also result in the permanent and temporary removal of 0.01 acre and 1.77 acres, respectively, of CDFW unvegetated streambeds, as well as 0.01 temporary acre of CDFW jurisdictional non-riparian vegetated bank.

The implementation of appropriate BMPs to treat Targeted Design Constituents, should adequately address any potential impacts to groundwater and surface runoff. The proposed project would not permanently alter the alignment of a stream or the configuration of a water body. Through compliance with the Caltrans NPDES permit and SWMP requirements, the proposed project is not anticipated to contribute to violations of water quality standards or objectives. The proposed project would require authorization under Section 404 of CWA Nationwide Permit, Water Quality Certification under Section 401 of the CWA (and a WDR permit for impacts on state waters only), and CDFW 1602 Streambed Alteration Agreement.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.2.3 Geology/Soils/Seismicity/Topography

2.2.3.1 Regulatory Setting

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

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department’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 Department’s Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

2.2.3.2 Affected Environment

The primary source used in preparing this section is the May 2017 *District Preliminary Geotechnical Report* prepared for the project.

Regional Geology

The project area is located within the Northern Perris Block in the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges are characterized by extensive pre-cretaceous intrusive igneous rocks ranging in composition and age from gabbro to granodiorite with tonalite being most common. The Perris Block lies between the Santa Ana Block to the west and the San Jacinto block to the east. The Northern Perris Block has been mostly buried by sediments from the Transverse Ranges to the north.

Topography

The I-15 alignment within the project area traverses Lytle Creek, Etiwanda Creek, and Day Creek alluvial fans emanating south from the San Gabriel Mountains in southwestern San Bernardino County. The alluvial fans emanating from the San Gabriel Mountains merge as one alluvial plain draining relatively uniformly from north to south toward the Santa Ana River in Riverside County. At a location approximately south of Arrow Route within the project limits, the alluvial fan drains at a gentler slope due to the presence of some loess topographic perturbation (gentle/small dunes). The Santa Ana River flows from the east-northeast to the west-southwest towards the Prado Basin and Prado Dam, which is located north of the City of Corona. Within the project limits, the I-15 vertical alignment extends from the southern end at a low elevation of approximately 740 feet, to the northern end at a high elevation of approximately 1,740 feet. In general, I-15 was built with a fill embankment above adjacent native grade; typically, with embankment fill slopes at gradients of 2:1 (horizontal: vertical) and sometimes 1½:1 (horizontal: vertical) under bridges or where slopes are paved. There are no significant slopes along most of the I-15 within the project alignment.

Soil Conditions

I-15 within the project location generally overlies soft (wind-blown surficial or eolian deposits – geologic unit Qye) in the southern section of the project limits (approximately from Cantu-Galleano Ranch Road to Arrow Route). This unit is anticipated to consist primarily of loose to medium-dense clean fine sands (SP), silty sands (SM), sandy silts and silts (ML). The northern section (approximately from Arrow Route to Duncan Canyon Road) has coarser granular alluvial soil (Qyf) consisting primarily of loose to medium dense gravel (GP/GM), sands (SP/SW), silty sands (SM), and sandy silts (ML). Well-rounded granitic cobbles are also common at the northern portion of the alignment.

Undocumented artificial fill (Afu) related to construction of the highway (1971 to 1989) is present for a depth of approximately 20 feet particularly in areas of the elevated road embankments adjacent to interchanges and bridge structures, and for long segments within the City of Ontario and southern Rancho Cucamonga.

Groundwater

Shallow groundwater is not expected to be found along the I-15 alignment within the project limits. The California Department of Water Resources Water Data Library lists wells within approximately two miles of the I-15 alignment, which indicate the shallowest groundwater at greater-than (>) 150 feet below the ground surface. However, a 1970 Log of Test Borings (LOTB) for the Arrow Route UC Bridge shows encountered groundwater seepage (“G.W.S.”) within a gravel layer at a depth of 16 feet. This groundwater measurement was reportedly made on January 22, 1970, one day after the boring was drilled. Groundwater was not encountered in the other borings performed at this Arrow Route UC bridge site.

There are several storm water detention/percolation basins, particularly adjacent to Etiwanda Creek. Significant seasonal groundwater fluctuations can occur near existing creeks/washes following heavy and persistent rain. In general, groundwater levels along the alignment would fluctuate due to rainfall, seasonal variation, upstream flood control management, upstream development, nearby construction, irrigation, and numerous other artificial and natural influences. Groundwater seepage may appear in cut and fill slopes along earth materials of contrasting permeability, particularly immediately after heavy rain.

Faults and Seismicity

Alquist-Priolo Earthquake Fault Zoning Act

California’s Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act; Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (referred to as earthquake fault zones). It defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also regulates seismic retrofits of some types of structures.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Section 2690–2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped seismic hazard zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

The California Geological Survey (CGS), under the State-mandated Alquist-Priolo Act of 1972, has delineated “Earthquake Fault Zones” along active or potentially active faults. As mapped on the May 1, 2003, *Corona North Quadrangle*, Special Studies Zones, *Official Map*, and the June 1, 1995, *Devore Quadrangle Revised Official Map*, known active fault traces do not cross the I-15 alignment at the project location. In addition, Riverside County and San Bernardino County have not mapped fault zones within the boundaries of this alignment.

However, the project area is subject to strong ground shaking resulting from fault zones within the region. These zones are considered some of the most active strike-slip faults in southern California, and are capable of inducing surface rupture. The San Andreas Fault, located approximately five miles north of the project corridor, marks the major strike-slip boundary between the Pacific and North American tectonic plates. The San Jacinto Fault Zone, Cucamonga Fault and several other faults are located in the general vicinity of the project corridor. The closest fault with Holocene (<11,000 years) displacement is the Cucamonga Fault, which approaches within 800 feet of the I-15 freeway near the northern end of the project area. The Red Hill - Etiwanda Avenue Fault is a relatively short fault aligned parallel to and northwest of I-15. (See **Figure 2-35** for Location of Faults Map.) **Table 2-58** provides the distance to local faults from the project limits at a mid-point near the Arrow Route UC Bridge. According to Historic Seismicity analysis, higher magnitude ground accelerations are expected at the northern end of this alignment, closest to the active San Jacinto and San Andreas faults. (See **Figure 2-36**, Historic Seismic Activities Map.)

Table 2-58. Distance from Nearby Faults

Fault Name	Distance (miles)		Moment Magnitude
	Arrow Route*	Closest to Alignment	
Red Hill Etiwanda Avenue Fault	2.7	1.8	6.2
Fontana seismic trend	3.3	0.0	6.5
Sierra Madre Fault Zone, Cucamonga Section	4.7	0.3	6.6
Sierra Madre Fault Zone, Sierra Madre East	8.8	8.8	7.2
San Antonio	8.9	8.8	6.5
San Jacinto, San Bernardino	9.4	6.8	7.7
San Jacinto, San Bernardino Valley	10.1	3.5	7.7
San Andreas, San Bernardino South	12.3	5.7	7.9
Elsinore, Glen Ivy	17.5	11.4	7.7
San Jacinto, San Jacinto Valley	23.0	21.2	7.7
*Distance between surface fault trace and I-15 Arrow Route UC Bridge. Source: I-15 CP District Preliminary Geotechnical Report, May 2017.			

The Fontana Seismic Trend is shown on Caltrans online tools to be trending from northeast to southwest aligned just southeast of the project location. However, no surface manifestations of faulting have been recognized in this area, and there are no known maps or studies of this fault. No lineaments or other evidence of faulting associated with the Fontana Seismic Trend was observed from the review of historic aerial photographs of this area.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of a soil are reduced (behaves like a liquid) by earthquake shaking of significant duration or other rapidly applied loading. Liquefaction and related types of ground failure are of greatest concern under conditions with loose to medium dense cohesionless soils, shallow groundwater, and sustained ground shaking.

The California Geological Survey (CGS) has not yet mapped liquefaction hazard zones for the project area. Riverside County has mapped the portion of the alignment within Riverside County (south of Philadelphia Avenue) as moderately susceptible to liquefaction. San Bernardino has no mapped liquefaction susceptibility zones along the I-15 alignment. Groundwater seepage was noted in one geotechnical boring in 1970 for the Arrow Route Bridge at an elevation of about 1,142 (about 16 feet below the ground surface). However, the groundwater was confined to the gravel layer where it was encountered and of limited lateral extent. California Department of Water Resources Water Data Library lists many wells within approximately 3½ miles of this alignment. None of the listed wells indicate groundwater within 50 feet of the ground surface. Given the regional groundwater depth and reported density of the alluvial soil, liquefaction potential along this alignment is considered very low.

Other Geologic Hazards

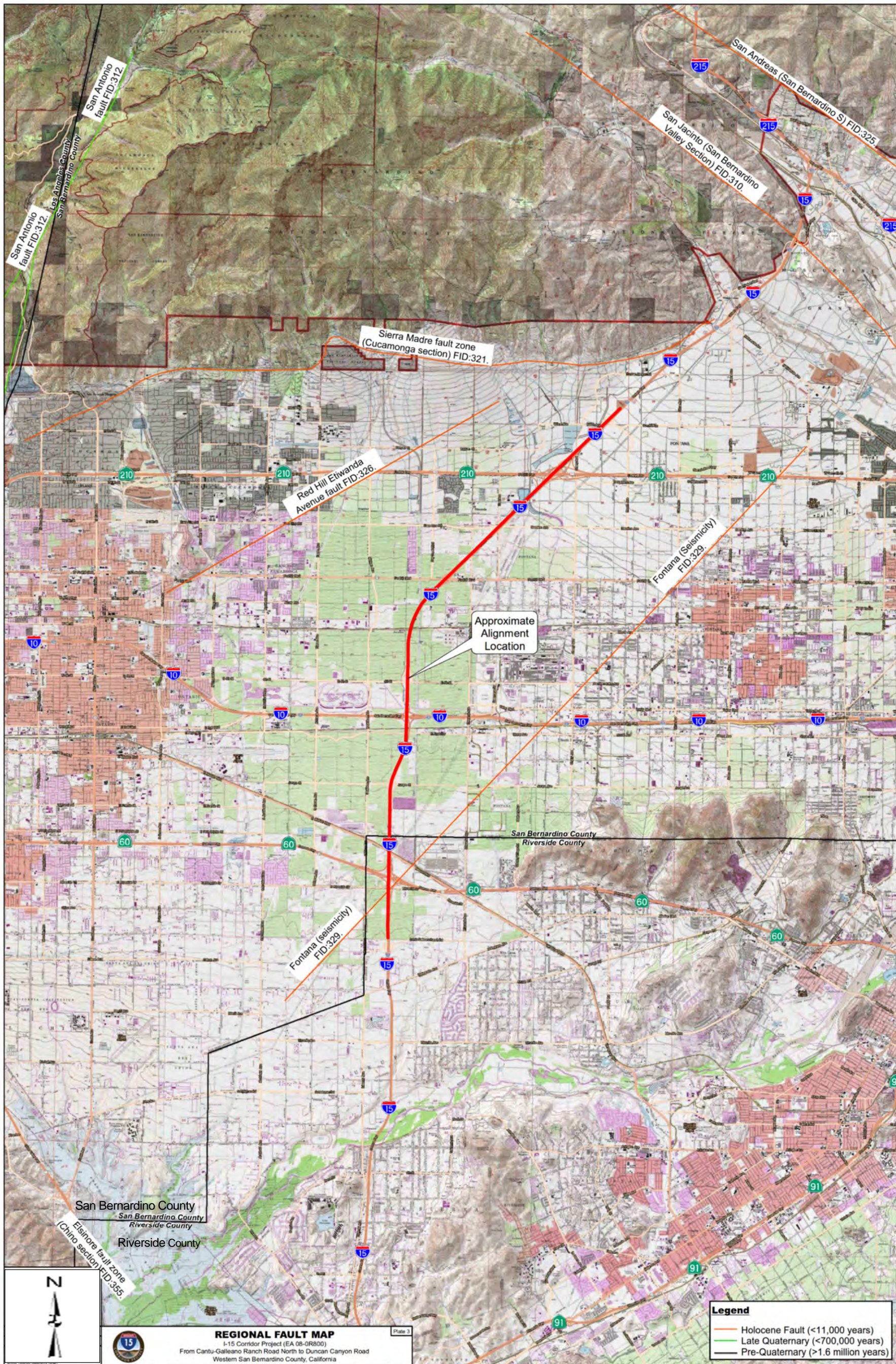
Landslides

The topography adjacent to the project location is relatively flat. Landslide considerations are limited to the roadway and bridge embankments. Further investigation of the existing and proposed embankment fill stability would be completed during the design phase of the project.

Seiche Hazard:

Seiche hazard occurs from standing waves that occur in an enclosed or partially enclosed body of water. Several shallow flood control basins exist adjacent to this alignment. Day Creek Basin (about 55 acres) is located about 1,200 feet east of the Mission Boulevard overhead bridge. An approximately 20-acre basin is located about 200 feet northwest of the Victoria Street undercrossing bridge. The San Seivaine Flood Control Basin (about 120 acres) is located approximately 500 feet west of the Cherry Avenue undercrossing bridge. However, most of the time, these basins are dry and do not represent a source of seiche hazard.

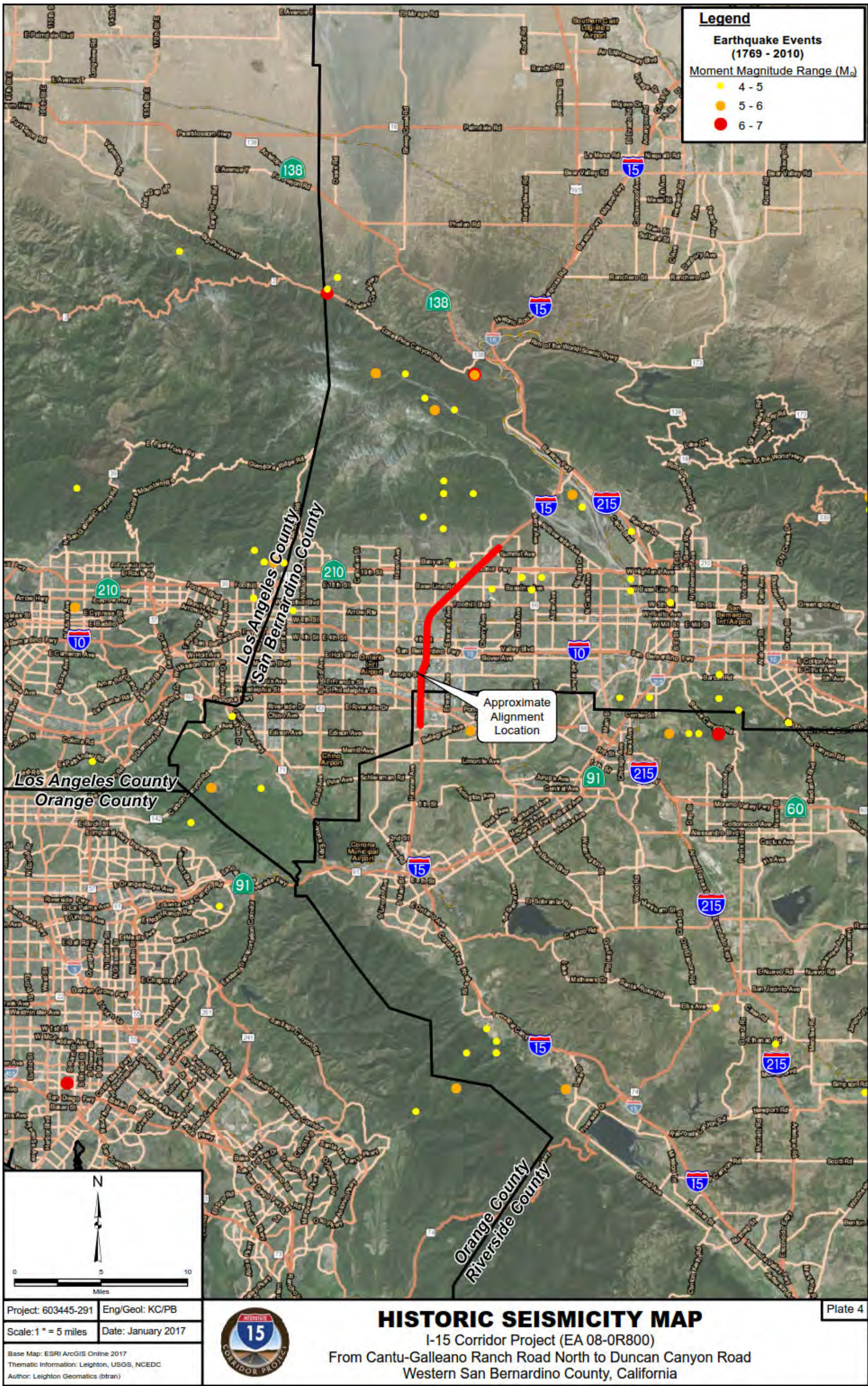
Figure 2-35. Location of Faults Map



Source: I-15 CP District Preliminary Geotechnical Report, May 2017.

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Figure 2-36. Historic Seismic Activities Map



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2.2.3.3 Environmental Consequences

No Build Alternative

There would be no change to the existing geology, soils, seismicity, or topography factors under the No Build conditions. Hazards associated with these factors would remain the same as with the existing conditions.

Build Alternative

Temporary

During project construction, excavated soil, including within cut and fill slope areas, may increase the potential for soil erosion, especially during storm events. Temporary effects due to soil erosion within the proposed project are discussed under the Water Quality and Storm Water Runoff Section. Erosion potential would be addressed through the implementation of erosion control BMPs in the SWPPP. No short-term direct or indirect adverse impacts related to soil compaction or erosion would occur during construction of the Build Alternative.

Soil and structure stability is a consideration during temporary excavation activities, including utility trenches, retaining wall excavations and other excavations. All excavation would be performed in accordance with project plans, specifications, all Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health of California (Cal-OSHA) requirements, and the current edition of the California Construction Safety Orders. The contractor must be responsible for providing a “competent person” as defined in Article 6 of the California Construction Safety Orders. During construction, exposed soil conditions shall be regularly evaluated. Close coordination with the Geotechnical Engineer of Record shall be retained to facilitate construction while providing safe excavations. It is anticipated that temporary soil and structure stability hazards are minimal with the implementation of rules and regulations and approved design plans.

Permanent

Ground Surface Rupture

Although the project is located within an area that are seismically active; however, no fault systems exist within the project alignment. The potential for surface rupture through this segment of I-15 is considered low.

Liquefaction and Lateral Spreading Potential

Liquefaction and lateral spreading potential along this alignment is considered to be very low due to the lack of shallow groundwater. Special considerations would be taken in areas where there are sloped embankments and potential large lateral-spreading forces. Further geotechnical investigation would be conducted at all bridges that would be widened as part of the project to evaluate liquefaction and lateral spreading factors to determine final foundation designs. Special design would be developed in areas where liquefaction could occur and overcome conventional pile foundations lateral load capacities.

Seismically Induced Settlements

Seismically induced settlement consists of dry dynamic settlement (above groundwater) and liquefaction-related settlement (below groundwater). This settlement occurs primarily within loose to moderately dense, dry or saturated granular soil. Due to the presence of nearby active faults, the project area is likely to experience moderate to strong earthquakes during the design life of the project. Settlements caused by ground shaking are often non-uniformly distributed, which can result in differential settlement. All existing bridges along this alignment would be designed to avoid this hazard. During the design phase of this project, fill embankments would be evaluated for dynamically induced and differential settlements. All structures would be designed to the maximum required, according to Caltrans standards and specifications, to withstand impacts of potential seismic shaking.

Earthwork

Earthwork for this project is expected to consist of (1) stripping vegetation and organic soils to expose new pavement subgrades; (2) cuts and fills to achieve roadway grades; (3) embankment widening and retaining wall backfill in areas of anticipated outside lanes widening; (4) backfill around proposed new bridge foundation elements; and (5) placement and compaction of pavement subgrades and aggregate base.

New fill slopes would be required for the I-15 embankment where outside widening is proposed. It is anticipated that fill material would be needed for the project construction and would mostly be imported from off-site. Limited borrow materials may be available from cut areas within the project limits. Fill material is needed particularly to augment existing embankments adjacent to the Jurupa Street, I-10, Fourth Street, and Foothill Boulevard interchanges and to fill in the unpaved median. Any fill soils and fill plans, whether using onsite or imported material, would be reviewed and approved by the Geotechnical Engineer of Record in accordance with Caltrans standards. Any finish cut slopes in alluvium and/or existing fill soils would be graded no-steeper-than 2:1 (horizontal: vertical). For sufficient stability of augmented embankments, new fills will be benched into existing fill in accordance with Section 19-6 of the Caltrans Standard Specifications (2015 Edition).

On the request of the Caltrans District Landscape Architect, the upper 12 inches of fill placed in areas to be landscaped with plants would be ripped or tilled to create a healthy medium for planting. Inadequate control of runoff water and/or poorly controlled irrigation can cause loose soils to collapse, resulting in settlement of pavements and/or other improvements, and increasing soil creep in areas immediately adjacent to slopes. Maintaining adequate surface drainage, proper disposal of runoff water and control of irrigation should help reduce the potential for future soil moisture related problems. Positive surface drainage would be provided to direct surface water away from pavements and slopes and towards suitable drainage facilities. Water would be transported off site in approved drainage devices such as gutters, paved drainage swales, or watertight area drains and collector pipes. Unpaved drainage swales would have a gradient of at least two percent. Sections 20 and 21 of the Caltrans Standard Specifications (2015 Edition) would be implemented in the design of slopes in order to be protected from erosion impacts. (Additional discussion of water runoff from the project is discussed in the Water Quality and Storm Water Section 2.2.2).

Earth Retaining Systems (Embankment settlement)

All proposed retaining walls are for new widened embankment backfill support. Retaining walls for cuts are not anticipated. Conventional Caltrans Type 1 standard plan reinforced concrete walls are currently proposed for the majority of retaining walls except where right of way restrictions prohibit its construction. Type 5 walls are anticipated to be used in such cases. Final site-specific retaining wall types would be investigated and determined during the final design phase. Retaining walls would be backfilled with local sands and gravel and/or imported sands and gravel that would be properly compacted and constructed with a back drain, in accordance to Caltrans standard plans and specifications (2015, Section 19-3.02C and D). Fine-grain or expansive soil would not be used as retaining wall backfill as it would result in higher lateral earth pressures exerted on retaining walls.

Final wall structural design would be developed based on site-specific exploration and testing of underlying embankment fills and native soils. Testing results will be used to prepared final design of bridges, embankments, retaining walls, and other structural elements of the project. All testing and design plans will be completed according to applicable Caltrans Standard Specifications and Special Provisions. For retaining walls up to 16 feet tall founded on dense alluvium at the base of fill embankments (not founded on fill soils), footings would be designed in accordance with Caltrans standard plans to be modified for higher seismicity-peak ground acceleration (PGA) higher than 0.6 g. In general, retaining walls located at or north of the Airport Drive UC Bridge should be designed for a PGA greater-than ($>$) 0.6g and would require site-specific structural design. Caltrans design PGA generally increases from south to north along this alignment, with the highest PGA at the Cherry Avenue UC, with a PGA at 0.82g. No walls would be supported on a combination of shallow and deep foundations. Walls supported on shallow foundations would be structurally separated from any wall supported on deep foundations to avoid anticipated differential settlement of shallow spread footings relative to piles.

Overhead Sign Foundations

Current project plans include 146 overhead sign structures. Overhead signs would be designed for enhanced wind and seismic lateral load resistance according to Caltrans specifications. Site-specific plans would be evaluated and determined during the final design phase.

Drainage Facilities (Culvert) Design

The condition of existing culverts would be evaluated during the final design phase. Existing culverts may need to be replaced or repaired if corroded; or flow capacity may need to be increased by replacing existing conduits with larger ones.

Modification of transverse drainage facilities is not expected and the overall drainage scheme for I-15 should remain the same as existing. However, proposed new pavements predominantly in the median (south of Mission Boulevard where the median has not yet been paved) may require capping of existing median drainage facilities (inlets), and redirecting storm water runoff to shoulders with a combined freeway transverse section as one chevron (V-shaped) peaked at the centerline k-rail. Existing shoulder inlets and edge drains would be protected when possible and enhanced. Where there is superelevation of mainlines such that sheet flow to the shoulders is not

possible, existing inlets may need to be replaced by grated line-drains and new conventional inlets where space permits.

Most of the existing I-15 drainage facilities were constructed between 1971 and 1989, and are therefore considered in good condition. However, some fill soils along the alignment may be relatively corrosive, which may potentially affect the existing median corrugated metal pipe (CMP) drainage facilities. Where these pipes are to be capped, consideration should be given to removing abandoned CMP to reduce potential collapse under the mainline that may result from ongoing corrosion. Future cost of such collapsed CMP repair and traffic disruption would likely outweigh any current cost of demolition/removal. Existing culverts and pipes to be abandoned would be abandoned in accordance with Section 15-2.05C (Standard Special Provisions) and encountered voids at culverts would be repaired in accordance with Section 15-6.02 (Standard Special Provisions) of the Caltrans Standard Specifications (2015 Edition). Existing pavement sub-drains and edge drains would be protected and extended under the new lanes. New drainage inlets would be designed in accordance with conventional Caltrans Standard Plans. New culverts and drain pipes would be embedded in sand in accordance with Section 19-3.02E (2); or in Controlled Low Strength Material (CLSM, “slurry”), where space is limited and subgrade drainage is not intended, in accordance with Section 19-3.02G of the Caltrans Standard Specifications (2015 Edition).

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

No measures are required.

2.2.4 Paleontology

2.2.4.1 Regulatory Setting

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

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

- 16 United States Code (USC) 431-433 (the “Antiquities Act”) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the secretary of the department of government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.
- 16 USC 461-467 (the National Registry of Natural Landmarks) establishes the National Natural Landmarks (NNL) program. Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated NNLs, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under the National Environmental Policy Act.
- 16 USC 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the

recently active parts of alluvial fans. The clasts (pebbles/cobbles) are described as typically angular to subrounded, but rarely rounded. At most places, this unit lacks soil development, but on the south side of the San Bernardino Mountains, it is locally capped by weak topsoil that has been classified as A/AC soil.

Young alluvial-fan deposits, Unit 5 – Qyf5, late Holocene. These sediments consist of unconsolidated to slightly consolidated coarse-grained sand to bouldery alluvial-fan deposits with slightly dissected to essentially undissected surfaces. They are notably finer-grained in some areas, especially in distal parts of fans. The braided stream pattern on the surfaces of fans, related to deposition, is relatively unmodified. On the south side of the San Gabriel Mountains, a large, well-formed fan emanates from the Lytle Creek drainage, largely sand and gravel. Although the younger Holocene (less than 11,700 years ago) sediments of this geologic unit may contain the remains of plants and animals, generally, not enough time has passed for them to become fossilized. In addition, these remains would be conspecific with modern species and, therefore, usually not considered scientifically significant.

Young eolian deposits – Qye, Holocene and late Pleistocene. These deposits consist of silt and medium- to fine-grained sand. They are slightly dissected by thin, discontinuous, poorly developed stream channels. Scientifically significant fossils are known from the older late Pleistocene (11,700 to 126,000 years ago) deposits within this geologic unit throughout Southern California (Jefferson 1991a, 1991b; Miller 1971; Springer et al. 2009). These older deposits span the end of the Rancholabrean North American Land Mammal Age (NALMA), which was named for the Rancho La Brea fossil site in central Los Angeles, dating from 240,000 to 11,000 years ago (Alroy 2000). The potential exists to encounter these types of fossils in the older sediments of this geologic unit within the project footprint.

Young alluvial-fan deposits, Unit 2 – Qf2, Holocene. These sediments consist of unconsolidated to loosely compacted alluvial-fan deposits. They are essentially undissected, but surficially, they are typically cut by an anastomosing network of channels. The size, shape, and distribution of clasts are similar to that of unit Qf. They are distinguished, in most cases, as fans that are built out on older sediments and, to some degree, fans that are relatively less dissected than, or emanating from, channels that are cut into older sediments. Although the younger Holocene (less than 11,700 years ago) sediments within this geologic unit may contain remains of plants and animals, generally not enough time has passed for them to become fossilized. In addition, these remains would be conspecific with modern species and, therefore, are usually not considered scientifically significant.

Young alluvial-fan deposits, Unit 1 – Qyf1, early Holocene and late Pleistocene. These sediments consist of slightly to moderately consolidated silt, sand, and coarse-grained sand to bouldery alluvial-fan deposits with moderately dissected surfaces. They have well-developed S5 soils on the south side of the San Gabriel and San Bernardino Mountains and form a major fill that was deposited throughout the San Bernardino Valley region during the transition between the late Pleistocene and Holocene (McFadden and Weldon 1987; Morton and Matti 1989). On the south side of the mountains, especially the San Gabriel Mountains, the fans contain a much higher percentage of boulders.

Research has determined that significant paleontological resources could be affected by the project. Highly sensitive geological formations, specifically **Qye** and **Qyf1** would be affected by the project. These Pleistocene age deposits may encompass significant paleontological resources.

Paleontological and geological searches indicate that two vertebrate fossil localities exist within 2 to 5 miles of the southern and central project alignment. These are a whipsnake (*Masticophis*) and deer (*Odocoileus*). These fossil localities are either in **Qye** or **Qyf1** deposits.

Occurrences of fossil resources are closely tied to the geologic units (e.g., formations or members) that contain them. The probability for finding significant fossils in a project footprint can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the project footprint. The Caltrans uses a tripartite scale, consisting of no potential, low potential, or high potential, to characterize paleontological sensitivity (Caltrans 2012).

The potential to affect paleontological resources depends on the depths of proposed earthwork and excavations, and previous site disturbances. It is the present understanding that ground-disturbing activities for the project may affect native material up to approximately 10 feet below ground surface (bgs) within the project limits. Earthwork to these depths could affect sensitive geological deposits (**Qye** and **Qyf1**) as summarized in **Table 2-59**. However, this work is unlikely to affect significant paleontological resources because of previous construction disturbances within the project footprint. Previous highway construction, as well as surrounding commercial, commerce, residential, and light recreational uses, may have previously disturbed the majority of sediment in the project footprint.

Table 2-59. Locations of Potential Impacts on Paleontologically Sensitive Areas Along the I-15 Alignment

Project Feature	Depth of Excavation	Geologic Unit	Monitoring?
I-15 Corridor underlain by sensitive units (deep augering and any excavation)	Deeper than approximately 10 feet bgs (estimated depth of modern disturbance)	Qye and Qyf1 of Morton and Miller (2006)	Part-time paleontological monitoring; full-time if trained crews discover paleontological resources

2.2.4.3 Environmental Consequences

No Build Alternative

If Alternative 1, the No Build Alternative, is selected, there would be no ground disturbance or excavation. Therefore, there would be no potential for impacts on unique paleontological resources or unique geologic features under the No-Build Alternative.

Build Alternative

The proposed I-15 CP extends for approximately 14.7 miles from Riv Post Miles 49.8-52.3 to SBD Post Miles 0.0-12.2. Alternative 2, the Build Alternative, would include the improvements to the identified portion of the I-15 Corridor as indicated in the Project Description.

Temporary

There would be no temporary impacts on paleontological resources. By their nature, any impacts on paleontological resources would be permanent.

Permanent

Ground-disturbing activities would occur during project construction. A significant impact may occur if grading or excavation activities associated with the project disturb unique paleontological resources or unique geologic features.

The analysis of the potential impacts of the I-15 CP Build Alternative in the Paleontological Identification Report/Paleontological Evaluation Report (PIR/PER) indicate that significant paleontological resources could be affected by the project, but that this is unlikely due to previous construction disturbances within the project footprint. Highly sensitive Pleistocene age geological formations would be impacted by the project and these may encompass significant paleontological resources, if work takes place in areas that are not previously disturbed.

The study area for paleontological resources was the disturbance limits of the Alternative 2 Build Alternative. Excavations for this alternative would potentially disturb two fossiliferous Pleistocene formations, Young eolian deposits of Holocene and late Pleistocene age, and Young alluvial-fan deposits, of early Holocene and late Pleistocene age. However, much of the project footprint has already been disturbed by past excavations and construction. Ground-disturbing activities for the Build Alternative may impact native material up to approximately 10 feet bgs within the project limits, and earthwork to these depths would affect sensitive geological deposits, if they are undisturbed.

No paleontological resources have been recorded in the project area. Ground disturbances associated with the project would primarily be shallow in nature, and unlikely to encounter paleontological resources at depths of less than five feet. Disturbance activity may also have already disturbed sediment below five feet in depth. However, deeper excavation, such as that for utility relocations or bridge piles and support piers, could encounter fossil resources at depths greater than 5 to 10 feet. Given the depths of previous disturbance and the small footprint of these excavations, there is a low likelihood of encountering paleontological resources during construction activities.

With mitigation as described in the following section, the project impacts on paleontological resources would be minor. Therefore, the I-15 Corridor Project Build Alternative would not result in direct or indirect impacts on paleontological resources.

A Paleontological Mitigation Plan (PMP), following Caltrans Standard Environmental Reference Guidelines, is recommended. Sensitivity analysis, as summarized in **Table 2-59**, indicates that paleontological monitoring should be conducted during earthwork in the Pleistocene-age deposits (**Qye** and **Qyf1**) on a part-time basis (Morton and Miller 2006). The PMP should be prepared during the environmental document phase of planning and should take into account the exact details of earthmoving activities, as much as possible, and determine specific areas for paleontological monitoring. The plan should detail procedures for fieldwork, worker training, part- and full-time monitoring, fossil recovery, laboratory analysis,

reporting and curation of any discoveries, and the required submittal of a Paleontological Mitigation Report upon completion of project earthmoving.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

P-1 A Paleontological Mitigation Plan (PMP) that follows Caltrans guidelines and the recommendations of the Society of Vertebrate Paleontology (SVP) will be prepared. The measures in this PMP will be conducted by a qualified vertebrate paleontologist. The PMP is anticipated to include, but not be limited to, the following measures (P-1a through P-1d identified as being mitigation measures under CEQA):

- a. A project-specific PMP will be prepared by a qualified principal paleontologist (MS or PhD in paleontology) once adequate project design information regarding subsurface disturbance location, depth, and lateral extent is available.
- b. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas may be halted or diverted by the Resident Engineer to allow the prompt recovery of fossils.
- c. Fossils collected during the monitoring and salvage portion of the mitigation program will be prepared to the point of identification, sorted, and cataloged.
- d. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program.
- e. The qualified principal paleontologist will be present at pre-construction meetings to confer with contractors who will be performing ground-disturbing activities.
- f. Paleontological monitors, under the direction of the qualified principal paleontologist, will be on site to inspect cuts for fossils at all times during original ground disturbance involving sensitive geologic formations.
- g. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited in a scientific institution with paleontological collections.

2.2.5 Hazardous Waste/Materials

2.2.5.1 Regulatory Setting

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

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

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

In addition to the acts listed above, 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 clean-up of wastes that are below hazardous waste concentrations, but could affect 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 project construction.

2.2.5.2 Affected Environment

The June 2016 *Initial Site Assessment* (ISA) was completed for the project to identify the potential presence of hazardous material in the project area. The ISA was completed in accordance with ASTM Standard Practice E 1527-13. The purpose of the ISA investigation is to identify the potential for the presence of recognized environmental conditions (RECs), including historic RECs (HRECs) and controlled RECs (CRECs), within and adjacent to the project area. RECs are identified as the presence or likely presence of any hazardous substances, including petroleum products in, on, or at a property. Based on the recommendations of the ISA, an April 2017 *Hazardous Materials Survey Report* and June 2017 *Site Investigation and Aerially Deposited Lead Survey* were completed for the project. Following is a summary of the investigation efforts and findings.

Initial Site Assessment

Environmental Records Review

A search of selected government databases was conducted using Environmental Risk Information Service's (ERIS) environmental database report system. Regulatory database lists were reviewed for cases pertaining to leaking underground storage tanks (LUSTs), aboveground storage tanks (ASTs), hazardous waste sites, and abandoned sites within a specified radius of 0.50 miles. Record review was supplemented with the records review of online databases such as the Geotracker database maintained by the SWRCB, the Envirostor database maintained by the DTSC, and the Solid Waste Information System (SWIS) database maintained by the California Department of Resource Conservation and Recycling. Following is a summary of database investigation:

- Off-site and non-adjacent Emergency Response Notification System (ERNS) listings, California Hazardous Materials Incident Reporting Service (CHMIRS), and off-site and non-adjacent hazardous waste generators, and San Bernardino County Certified Unified Program Agency (SANBERN CUPA) facilities were determined to be of a low potential to affect the project corridor. Several CHMIRS and ERNS listings were found within the project area. These listings were evaluated and were reported to have been cleaned up.
- The SWIS database identified historical landfills (Etiwanda Disposal Site) to be located within and adjacent to the east side of the project limits. The Etiwanda Disposal Site is bisected by Victoria Street in the City of Fontana and appears to extend within the I-15 Caltrans right of way. The facility is currently closed and is biennially inspected by the San Bernardino County Solid Waste Management District. The San Bernardino County Flood Control District is the current owner of the land previously occupied by the Etiwanda Disposal Site.
- Review of the National Pipeline Mapping System's website shows that three hazardous materials pipelines are intersecting the project corridor. They are two multi-product pipelines that intersect the project corridor north of East Airport Road in the City of Ontario along the UPRR right of way, and one "retired" crude oil pipeline intersects the project corridor north of Sixth Street in the City of Rancho Cucamonga within Southern California Railroad Authority (SCRRA) right of way. Further investigation of the pipelines to obtain additional information on pipelines determine that no releases are reported for the pipelines within the project limits.
- Based on the time period of construction of I-15, leaded gasoline was still in use, even though the concentrations of lead in the gasoline available at the time were declining and the number of vehicles using non-leaded gasoline was increasing. As a result, there is the potential for the presence of lead within the project limits.
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), online mapping database, updated July 23, 2015, (DOGGR, 2015) were reviewed for information regarding the location of oil wells on or near the project corridor. Evidence of on-site oil or gas wells or oilfield-related facilities was not identified within the project area from data base review and site reconnaissance.

Historical Records Review

Historical information on the project corridor was reviewed for evidence of past uses and activities that would suggest the potential presence of hazardous substances along the project corridor and to evaluate the potential for impacts from off-site sources of contamination. The following is a summary of the review efforts and findings:

- Historical aerial photographs were reviewed for information regarding past site uses. Aerial photographs were reviewed for the following years: 1953, 1972, 1976, 1989 and 1990, 1994, 1995, 2002, 2003, 2011, and 2012. In the earlier years, aerial photographs show that the project corridor traverses multiple structures, agricultural row crops, orchards, vacant undeveloped land, and intermittent streams. The UPRR and Mission Boulevard were observed in the southern portion of the project corridor. Aerial photographs show that vacant and agricultural land was replaced gradually over the years with the interstate and state highway facilities, as well as, commercial, industrial, and residential land development.
- Historical topographic maps were reviewed for the project site and surrounding areas include topographic map coverage (from south to north) provided by the Guasti (1953, 1966, 1973, and 1981), Cucamonga Peak quadrangles (1953, 1966, 1973, 1980, and 1996), and Devore quadrangles (1954, 1966, 1980, and 1996). Several land uses and activities were identified and evaluated for potential impacts and for the need of additional investigation, if any. Additional land use development within and adjacent to the project area shown by the topographic maps included the Southern Pacific Railroad, the Atchison Topeka and Santa Fe Railroad, multiple power transmission lines, steel plant, sewage disposal dump, and the Ontario Motor Speedway.

Site Reconnaissance

On September 29, 2015, representatives of Leighton Consulting conducted a reconnaissance-level assessment of the project corridor. The site reconnaissance consisted of observing and documenting the existing site conditions of the project corridor. Reconnaissance was conducted by driving the project corridor on the I-15 NB and SB, observations from surface streets adjacent to the I-15 facility, and observations of bridge under crossings and walking public rights of way in specific areas of interest. The following is a summary of observation findings:

General Site Setting

The properties surrounding the project corridor consist of undeveloped land; vacant land; and residential, commercial, and industrial sites. There are no proposed right of way acquisitions for the project. However, three temporary construction easements are located outside of the I-15 alignment. Two are located on either side of the Rochester Overhead Bridge adjacent to the north side of the SCRRA right of way, and one is located adjacent to the northwest side of the Day Canyon Channel Bridge.

Exterior and Interior Observations

- Hazardous substances, drums, or other chemical containers were not observed within the visible areas of the project corridor.

- Evidence of underground storage tanks (USTs) was not observed within the project corridor. Two large aboveground water storage tanks were observed adjacent to the northbound side of the project location south of Baseline Road.
- Pole- and pad-mounted transformers were observed adjacent to the project location. Staining was not observed beneath these transformers. The transformers observed on adjacent properties appeared to be working properly and in good condition. In addition, the database review did not report releases of polychlorinated biphenyls (PCBs) along the project corridor. The observed transformers are reportedly owned and operated by SCE, and as such, it would accept responsibility for cleanup from leakage, repair, or replacement activities. Given the utility ownership and observed conditions, the electrical transformers are not considered to represent a likely past, present, or material threat of release, nor do they represent a recognized environmental condition to the property at this time.
- The project corridor is covered with various forms of litter discarded from passing vehicles or blown into the I-15 corridor by the wind. Regular litter removal activities within the I-15 corridor are conducted by Caltrans.
- Evidence of pits, ponds, lagoons, septic systems, sumps, wastewater, and cisterns were not observed within the project corridor. Numerous storm water drains were identified along the shoulders and median of I-15.
- Pesticides were not observed on site. However, historically, the area within the project corridor was used for agricultural purposes, including row crops, orchards, and vineyards. Pesticides and arsenical herbicides were possibly used during this time.
- Evidence of staining and discolored soils was observed on site along the shoulders of I-15 at several locations. The stains were generally no more than 1.5 feet in diameter and represent de minimus impacts.
- Stressed vegetation was not observed on site. Unusual odors were not detected on site. Evidence of oil or gas production wells was not observed within the project corridor.
- Asbestos-containing building materials may be present in some of the bridges associated with the project corridor.
- A lead-based paint survey was not performed as part of this investigation. Lead-based paint may be present in some of the bridge structures. Yellow striping paint frequently used on highways may contain lead and/or chromium.
- Construction activities were observed on the north side of the Baseline Road under the crossing bridge, as well as along the NB and SB shoulders between Baseline Road and the northern terminus of the project corridor.
- Soil stockpiles were observed adjacent to the NB lanes of I-15, located south of Duncan Canyon Road in the City of Fontana. Stockpiles originated from the on-going construction within the project corridor.
- Evidence of on-site oil or gas wells or oilfield-related facilities was not identified within the project corridor.
- Evidence of groundwater monitoring wells was not observed within the project corridor

Limitations of Methodology

The site reconnaissance was limited to observations while driving the corridor. Fences, vegetation, buildings, etc., limited the observations. In addition, the corridor within the project area was undergoing construction along the NB and SB shoulders from approximately Victoria Street to Duncan Canyon Road through the cities of Rancho Cucamonga and Fontana. Construction activities limited observation of the shoulders along this section of the project corridor during the site reconnaissance.

Due to the large size of the project corridor, the regulatory database was reviewed to a limited 0.5-mile radius. In addition, since the proposed project improvements are limited to the existing Caltrans right of way; environmental liens were not researched. User or owner interviews were not conducted as the project corridor is owned by Caltrans and no right of way acquisitions are anticipated. Historical information (e.g., topographic maps and aerial photographs) prior to 1953 was not available for review.

Physical Setting

Pertinent maps and readily available literature were reviewed for information on the physiography and hydrogeology of the project corridor. The project location is covered by the United States Geological Survey (USGS) 7.5-minute map series, specifically the Corona North, (1981), Guasti (1982), Cucamonga Peak (1996), and Devore (1996) quadrangles. Elevation rises from 690 feet south of Bellegrave Avenue to roughly 1,800 feet north of Duncan Canyon Road

Etiwanda Creek intersects the project corridor approximately 2.1 miles north of I-10 in Ontario. Day Creek intersects the project corridor approximately 0.6 mile southwest of I-210 in Rancho Cucamonga. A reservoir is also located adjacent to the northwest of the project corridor approximately 0.6 mile southwest of I-210.

The project corridor traverses the Chino Sub basin and Rialto-Colton Sub basin of the Upper Santa Ana Valley Groundwater Basin. According to Caltrans logs of borings drilled as part of the development of the I-15 project in this area, groundwater was encountered in several of the more than 438 borings reported in this area.

Groundwater seepage may appear in cut and fill slopes along earth materials of contrasting permeability, particularly immediately after heavy rain. In general, shallow groundwater conditions do not exist along the majority of the project corridor. However, aerially deposited lead (ADL) may be encountered in shallow water conditions within active drainage areas and washes extending across the project corridor. More information on the physical setting and groundwater depths for the project area is found in Section 2.2.2, and Section 2.2.3 of this document.

Hazardous Material/Waste Concerns

The reviews of historical documentation and existing conditions identified the following potential environmental conditions within the project area:

- Based on the historical site use for agricultural purposes, residual OCPs and arsenical herbicides may exist in the subsurface soil.

- Railroad rights of way cross the project corridor at the Mission Boulevard railroad overhead, the Vina Vista railroad overhead, the Rochester railroad overhead, and the Etiwanda railroad overhead. Soils in the vicinity of the railroad rights of way may be impacted by total petroleum hydrocarbons (TPH), polynuclear aromatic hydrocarbons (PAHs), and/or heavy metals, including arsenic.
- Bridge widening activities may disturb soils in these areas. Since the project corridor is an historical and existing transportation corridor, the potential for soil impacts from ADL exists. ADL Survey is needed for w the project corridor. Existing ADL surveys prepared recently for other projects also provide data regarding ADL presence within some sections of the project limits.
- An asbestos survey and lead-based paint survey is needed to investigate structures (bridges) that are proposed for demolition and/or modification as a result of this project. Testing and removal requirements for yellow striping in accordance with Construction Program Procedure Bulletin 99-2 is also recommended.
- While the Etiwanda Disposal Site pre-dates the I-15, and a portion of the facility lies within the project corridor, the remainder is located adjacent to the project corridor. There is the potential for impacted soils to have been incorporated into fill surrounding the Victoria Street Bridge during the construction of the project corridor. Sampling for Title 22 metals and PAHs is required for the area in the vicinity of the Victoria Street Bridge.
- Temporary construction easements were identified outside the right of way limits, but within the project footprint. However, ground disturbance is not anticipated at these locations; therefore, soil investigation in these areas is not warranted.
- No CRECs or HRECs were identified for the project corridor.

Hazardous Materials Survey

Based on the June 2016 *Initial Site Assessment* findings and recommendations, an asbestos-containing material (ACM) and lead-based paint (LBP) survey was performed at various bridges included within the project limits. The various structures primarily consisted of one of two types of box beam construction. Fourteen bridges are of prestressed box beam type construction, four bridges of reinforced concrete box beam type construction, and one bridge of prestressed I-girder type construction. The bridges are concrete structures that tie into asphalt pavement. Side barriers vary, from permanent concrete or concrete with metal railings to temporary side barriers constructed of K-rails. Certain utilities were also found to contain suspect materials. This included both neoprene rubber and asphaltic black wraps or coatings associated with water pipes and drains, at several of the bridge sites. The survey was performed to identify hazardous materials (asbestos, lead-based paint and chromium) likely to be impacted when the bridges are modified. The survey performed was limited to accessible, hazardous materials and the testing of representative areas as designated. Subsurface investigations were not included as part of this investigation (see **Figure 2-37** for the location of the investigated structures).

Asbestos

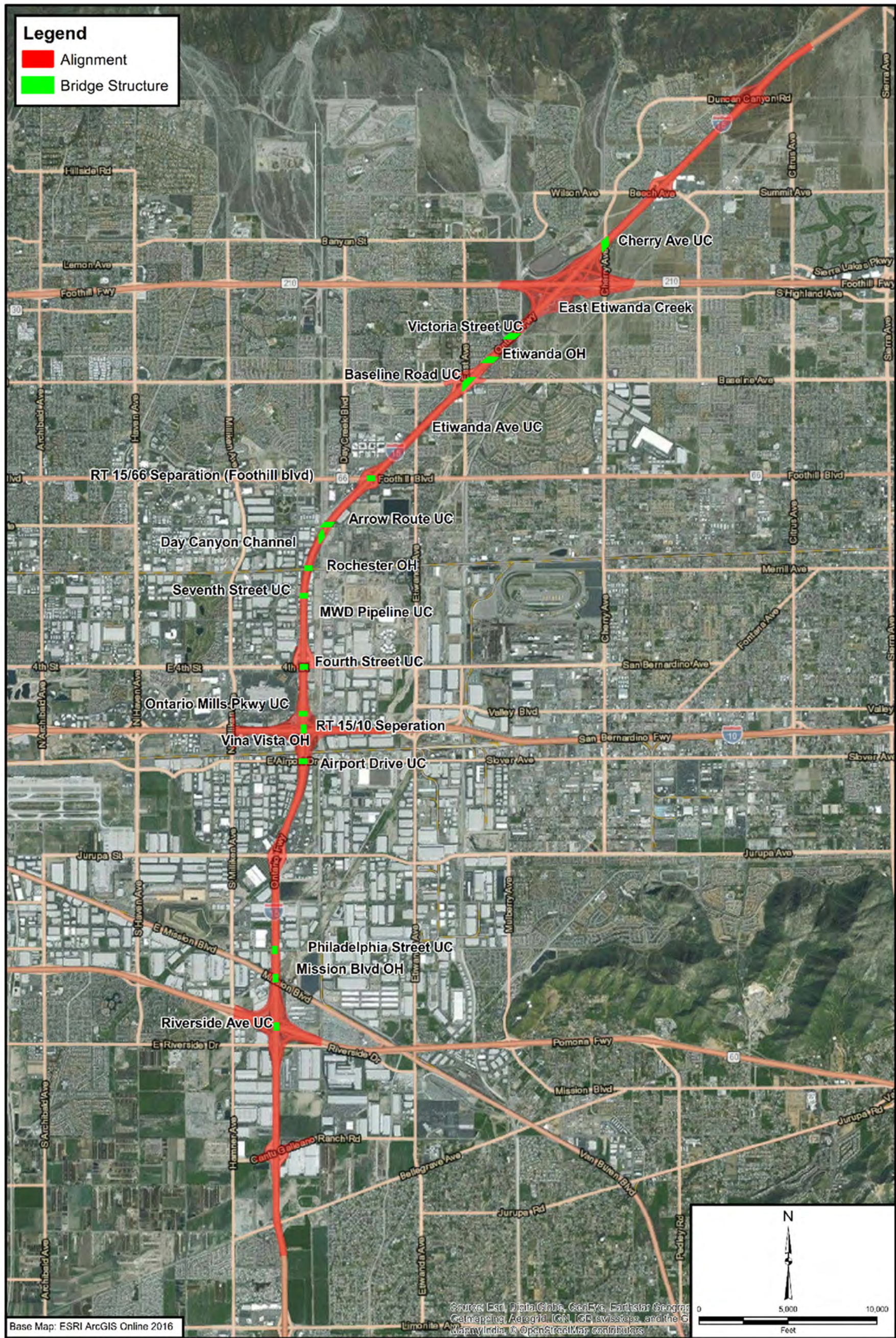
Asbestos is a common term for a group of naturally occurring mineral fibers. Due to its durability and insulating quality, it was used in a wide variety of building products including structural fireproofing. Adverse health effects have been associated with the inhalation of airborne asbestos fibers by asbestos industry workers. The asbestos fibers that are tightly bound in building materials do not represent an exposure hazard unless disturbed in such a way that releases airborne fibers (i.e., cutting, drilling, or sanding). Per Cal-OSHA standards, 8 California Code of Regulations (CCR) 1529, Asbestos-containing construction materials (ACCMs) are defined as any material with an asbestos content greater than one-tenth of one percent ($>0.1\%$). Cal-OSHA sets forth work requirements for disturbance of ACCMs including removal operations for all types of ACCMs.

In accordance with the U.S. EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP) regulation and the South Coast Air Quality Management District (SCAQMD), all structures planned for renovation or demolition must be surveyed for ACMs prior to the planned renovation or demolition. The U.S. EPA and SCAQMD also require removal of all regulated ACMs prior to demolition or renovation. Regulated ACMs include friable and non-friable, which have or would become friable by demolition or renovation activities. Removal involves, to the greatest extent practical, the complete removal, disposal, and replacement, if necessary, of the ACMs. Removal usually also requires encapsulation of the remaining structure to lock down residual fibers that may exist.

The asbestos survey was performed generally in accordance with the Asbestos Hazard Emergency Response Act (AHERA) protocol (40 CFR Part 763, Subpart E) and the requirements of SCAQMD Rule 1403. Visual identification was performed by assessing visible and accessible structural, architectural, and mechanical components that may be impacted as part of this specific project, for the presence of suspect ACM at the project site. Each identified suspect ACM was sampled in accordance with procedures established by the U.S. EPA. Suspect materials that were observed in areas where work is to be performed, as per the preliminary design plans, were sampled. The project is primarily scoped to tie into the existing bridge structures on the shoulders and median edges, where appropriate, and not the entire bridge. A minimum of three bulk samples were collected of all thermal system insulations and all miscellaneous materials. The samples were submitted for analysis by polarized light microscopy (PLM) using dispersion staining techniques in accordance with the U.S. EPA's Method for the Determination of Asbestos in Bulk Building Materials U.S.

The results of the bulk samples collected for asbestos, and analyzed by PLM, indicate that detectable concentrations of asbestos greater than 0.1 percent are present in some of the finishes tested at the Victoria Street Undercrossing, the Etiwanda Overhead, the Baseline Undercrossing, the Rochester Overhead, and the I-10/I-15 Separation.

Figure 2-37. Location of Investigated Structures



Source: I-15 CP Hazardous Materials Survey Report, April 2017.

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Lead-Based Paint

Lead is a pliable, soft metal that is used in constructing pipes, rods, and containers. Before 1978, lead was a common ingredient in paint because it added strength, shine and extended the life of the paint. Lead-based paint is recognized as a potential health risk due to the known toxic effects of lead exposure (primarily through ingestion) on the central nervous system, kidneys, and blood stream. The risk of lead toxicity of lead-based paint varies based upon the condition of the paint and the year of its application. The bridges surveyed during this investigation were constructed between approximately 1972 and 1989.

Final Rule, (40 CFR Part 745), US EPA, defines lead-based paint as: paint, varnish, shellac, or other coating on surfaces that contain 1.0 mg/cm², 5,000 ppm, or more of lead or 0.5 percent or more lead by weight. Chromium-containing wastes may be classified as a hazardous waste based on toxicity characteristic according to RCRA or state thresholds (California Code of Regulations, Title 22, Section 66261.24). Cal-OSHA governs all construction work where an employee may be occupationally exposed to lead (Construction Lead Standard, CCR Title 8, Section 1532.1). Work that involves disturbing materials containing more than 0.50 percent lead by weight is conducted in accordance with the Cal-OSHA Lead Standard. Waste materials containing lead and chromium are subject to regulations controlling the transportation and disposal of such materials according to DTSC regulations for transportation, treatment, storage and disposal of lead-containing wastes that qualify as hazardous waste.

A total of seven paint chip samples were collected and tested for determination of the total threshold limit concentration (TTL) lead and chromium levels. Sample digestion and analysis was performed in accordance with SW-846, U.S. EPA Method 6010C/3050B, with analysis performed by inductively coupled plasma (ICP). Chromium testing was performed in accordance with SW-846, U.S. EPA Method 6010C/3050B, with the additional parameter of testing for lead.

The results for this investigation indicate that there were no surface coatings that had lead concentrations sufficient to define them as lead-based paint in accordance with 17 CCR 35001 et. seq., and 8 CCR 1532.1.

Chromium-containing coatings were identified in center striping paint on the Etiwanda Overhead Bridge, the Baseline Undercrossing Bridge, the I-15/SR-66 Separator Bridge, and the I-15/SR-60 Separator Bridge. Chromium was detected, at concentrations ranging from 4.6 to 39 milligrams per kilogram within the median yellow striping on the bridges. The chromium identified in the yellow striping paint is assumed to be hexavalent based on containing lead chromate (PbCrO₄) as its primary pigment. Therefore, the majority of the chromium encountered in the subject matrix (yellow safety paint) is of the hexavalent oxidation state.

Site Investigation and Aerially Deposited Lead Survey

The site investigation was performed to investigate four recognized environmental conditions identified during the June 2016 *Initial Site Assessment*:

- ADL from vehicle exhaust along the I-15 right of way. Tetraethyl lead, which was added to gasoline for many years, is present in the vehicle exhaust emissions and gets aerially deposited in soils adjacent to thoroughfares.

- Potential impacts from railroad activities at the four railroad overhead locations along the I-15 right of way. Railroad overhead bridges are located north of Mission Boulevard (Mission Boulevard Overhead); between Airport Drive and I-10 (Vina Vista Overhead); between Seventh Street and the Day Canyon Channel (Rochester Overhead); and between Baseline Road and Victoria Street (Etiwanda Overhead). Railroads have the potential to be impacted by heavy metals, TPH, PAHs, OCPs, and PCBs.
- Potential impacts from former agricultural use of the I-15 right of way. Approximately half of the I-15 right of way is located on land that was used for agriculture during the latter half of the 20th century. As a result, there is the potential for soils within the right of way to be impacted with agricultural chemicals in the form of arsenic and OCPs.
- Potential impacts to the I-15 right of way in the vicinity of Victoria Street from the former Etiwanda Disposal Site. Based on the types of materials disposed of and the time period in which it was active, the site has the potential to be impacted by heavy metals, TPH, PAHs, OCPs, and PCBs.

On November 4, 2016, and between March 14, 2017, and April 5, 2017, a total of 204 borings were advanced at approximately 600-foot intervals on the shoulders and ramps of the study area of the I-15 Freeway, as well as beneath the railroad overheads and in the vicinity of the former Etiwanda Disposal Site to investigate the presence of ADL and agricultural chemical use along the alignment and the impacts to the soils beneath the railroad bridges related to current and past railroad operations and the Etiwanda Disposal. 655 soil samples were collected during the investigation. Ramp boring locations have been placed at shorter intervals to generate sufficient data to be suitable for statistical analysis. These samples were collected to attempt to maintain an adequate number of samples for the statistical analysis. Discrete soil samples were collected from each soil boring at depths of 0.5, 1.0, 2.5, and 5.0 feet bgs, or practical refusal, using a direct push drill rig or hand auger.

ADL

Soil samples collected for the ADL survey were analyzed for TTLC lead by U.S. EPA Method 6010B. Samples with TTLC lead concentrations above 50 milligrams per kilogram (mg/kg), but less than 1,000 mg/kg, were analyzed for STLC lead by the Waste Extraction Test - Citric Acid (WET-CA) method. Samples that exceeded 5 milligrams per liter (mg/l) by the WET-CA method were also analyzed by the Waste Extraction Test - Deionized (WET-DI) method. Based on the results of this analysis, an additional 10 percent of soil samples were selected to be analyzed by the WET-CA method. Ten percent of the soil samples were selected to be analyzed by the WET-CA method and for soil pH using U.S. EPA Method 9045.

Statistical analysis identified that the 95-percent upper confidence limit (UCL) for the population mean for TTLC lead was 8.39 mg/kg. The 95 percent UCL for soluble lead (WET-CA) was 1.33 mg/l; therefore, tested soil does not represent significant environmental or health hazards and can be classified as non-hazardous. The average TTLC lead concentrations are below the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 screening level 80 mg/kg for unrestricted land use.

Organochlorine Pesticides (OCP)

Samples collected from areas of former agricultural site and areas within the railroad bridge abutments were analyzed for OCPs by U.S. EPA Method 8081A. One OCP (4,4'-DDE) was reported above the method detection limit in six (6) soil samples collected from former agricultural sites, at a maximum concentration of 0.077 mg/kg in AL-03-1.0. This concentration is below the EPA commercial/industrial regional screening level (RSL) of 9.3 mg/kg. In addition, six OCPs were reported above the method detection from soil samples collected in the areas of the railroad abutments. The maximum concentrations of each of the OCPs detected were below their respective EPA RSLs for commercial/industrial land use.

Polychlorinated Biphenyls (PCB)

Samples from the railroad abutment and from the Etiwanda Disposal Site were analyzed for PCBs by U.S. EPA Method 8081A. PCBs were not detected at concentrations exceeding limits for EPA RSLs.

Total Petroleum Hydrocarbons (TPH)

Samples from the railroad abutment and from the Etiwanda Disposal site were analyzed for TPHs by U.S. EPA Method 8015B. The concentrations of TPH identified in the railroad abutment investigation or the Etiwanda Disposal Site investigation do not exceed EPA RSLs for commercial/industrial land use.

Polynuclear Aromatic Hydrocarbons (PAHs)

Samples collected from the railroad bridge and the vicinity of the former Etiwanda Disposal Site were analyzed for PAHs by EPA Method 8310. The maximum concentrations of each of the PAHs detected were below their respective EPA RSLs.

Title 22 Metals

Soil samples collected from the railroad bridge abutments and in the vicinity of the former Etiwanda Disposal Site were analyzed for Title 22 metals by EPA Methods 6010B and 7471A. Concentrations of metals exceeding their respective EPA commercial/industrial RSLs were not identified, with the exception of arsenic. Two samples in the vicinity of the Etiwanda Overhead railroad bridge abutment contained concentrations of arsenic greater than the EPA commercial/industrial RSL and the DTSC- recognized Southern California background arsenic concentration of 12.0 mg/kg.

2.2.5.3 Environmental Consequences

No Build Alternative

There are no improvements proposed under the No Build Alternative. Therefore, there would be no activities that would result in an impact due to hazardous material and hazardous waste.

Build Alternative

Temporary

Hazardous material may be encountered during the construction activities that involve disturbance of soil, paint within the pavement sections, and areas of structures affected by bridge widening. A summary of the potential hazardous materials impacts and requirements are discussed in this section. It is anticipated that with the implementation of Caltrans standard provisions and requirements, the project would not have hazardous material impacts due to the construction activities of the project.

Asbestos

The results of the bulk samples collected for asbestos, and analyzed by PLM, indicate that detectable concentrations of asbestos greater than 0.1 percent are present in some of the finishes tested at the Victoria Street Undercrossing, the Etiwanda Overhead, the Baseline Undercrossing, the Rochester Overhead, and the I-10/I-15 Separation. Work that involves these structures and impacts asbestos-containing materials, as defined by 8 CCR 1529, would be considered asbestos-related work. State License Board (CSLB)-licensed contractor holding a California Department of Occupational Safety and Health registration would be required to handle the asbestos-related work. A Plan for Management of Asbestos Containing Materials in Bridges will be required for the project as required by Caltrans Standard Special Provision (SSP) 14-11.16.

Written notification regarding this work would be made to the South Coast Air Quality Management District (SCAQMD), in accordance with SCAQMD Rule 403, and to Cal/OSHA in accordance with 8 CCR 1529. Work performed during activities (i.e., drilling, cutting, sanding, scraping) that disturb the asbestos-containing materials would be done in compliance with the most recent editions of applicable federal, state, and local regulations, standards, and codes for governing abatement, transport, and disposal of asbestos-containing materials. Materials encountered on the bridge structures that are not part of the completed investigation would be required to be properly sampled for the content of asbestos or assumed to be asbestos-containing prior to disturbance.

Lead-Based Paint and Other Hazardous Materials

The results for this survey indicate that within the project area, there were no surface coatings which had lead concentrations defining them as LBPs, in accordance with 17 CCR 35001 et. seq., and 8 CCR 1532.1. Chromium-containing coatings were identified on the Etiwanda Overhead Bridge, the Baseline Undercrossing Bridge, the I-15/SR-66 Separator Bridge, and the I-15/SR-60 Separator Bridge, at concentrations ranging from 4.6 to mg/kg, within the yellow safety paint striping used to demarcate the median on the bridges. Yellow striping paint that must be removed at these locations would be handled and managed in accordance with 8 CCR 1532.2.

OSHA considers any detectable concentration as potentially hazardous to workers who would be exposed to the airborne contaminate. Therefore, all painted or coated surfaces would be treated as potentially containing lead. Employees who work around potential lead-based or lead-containing coatings must have HAZCOM training. Activities involving potential and identified lead-containing surfaces are anticipated to be conducted in accordance with California Health & Safety Code Sections 17920.10 and 10525, 10525.7, and 8, CCR 1532.1. The contractor will be

responsible for collecting the appropriate number and type of lead disposal profile samples from exposed areas prior to the removal and disposal of paint or other surface coatings. Proper waste characterization, handling, packaging, labeling, and transportation to a permitted hazardous disposal facility should be according to the latest rules and regulations.

ADL

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 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 project limits as long as all requirements of the ADL Agreement are met.

Based on the site investigation, including ADL survey data and statistical analysis, the soil is classified as non-hazardous and below residential health risk levels with no restrictions to use according to the soil management agreement between the DTSC and Caltrans.

Agriculture and Disposal Site Hazardous Material

Based on the results of the soil samples collected along the I-15 alignment and in the vicinity of the Former Etiwanda Disposal Site, the alignment is not shown to be impacted by the former agricultural activities or the former Etiwanda Disposal Site.

Railroad Site Hazardous Material

Soil samples collected from the railroad bridge abutments did not indicate the presence of contaminants exceeding their respective U.S. EPA commercial/industrial RSLs and DTSC levels, with the exception of arsenic. Two samples in the vicinity of the Etiwanda Overhead railroad bridge abutment contained concentrations of arsenic greater than the USEPA commercial/ industrial RSL and the DTSC-recognized Southern California background arsenic concentration of 12.0 mg/kg.

Based on the results of the Railroad Abutment Investigation, a soil management plan according to DTSC guidance would be required to address the arsenic impacts identified beneath the Etiwanda Overhead. The soil management plan would consist of segregation and stockpiling of soils excavated between 1.0 and 5.0 feet below ground level in the vicinity of the Etiwanda Overhead, waste profile sampling of segregated soils, and, if necessary, disposal of arsenic-impacted soil at an approved disposal facility.

With the implementation of the identified avoidance and minimization measures, it is anticipated that the project would result in minimal impacts related to hazardous material and hazardous waste from the construction activities of the project.

Permanent

The project operation would not result in creation of hazardous material or hazardous waste, and would not increase people's exposure to hazardous material. The Express Lanes would not be

open to the type of vehicles that typically transport hazardous material or waste. In addition, transport of hazardous material is governed by existing rules and regulations for storage and transport of such material. It is not anticipated that the Build Alternative would result in impacts on people and environmental resources from hazardous material and hazardous waste.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

In general, observations should be made during future site development for areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, stained soil, or odorous soils. Should such materials be encountered, further investigation and analysis may be necessary at that time. With the implementation of the identified standard avoidance and minimization measures, it is not anticipated that the project will result in impacts related to hazardous material

HAZ-1 Prepare and implement a soil management plan to address the arsenic contamination identified beneath the Etiwanda Overhead. The soil management plan should consist of segregation and stockpiling of soils excavated between 1.0 and 5.0 feet below ground level in the vicinity of the Etiwanda Overhead, waste profile sampling of segregated soils, and, if necessary disposal of arsenic impacted soil at an approved disposal facility.

2.2.6 Air Quality

2.2.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (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 (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5})—and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), 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 (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), sulfur dioxide (SO₂). California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, 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 project comes from a conforming RTP and TIP; the project has a design concept and scope⁷ 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 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.

⁷ “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.

2.2.6.2 Affected Environment

This Air Quality section was prepared based on the impact analyses presented in the December 2017 *Air Quality Report*. The proposed project is located in the South Coast Air Basin in San Bernardino and Riverside counties. The SCAQMD has jurisdiction over air quality issues throughout the South Coast Air Basin. It administers air quality regulations developed at the federal, state, and local levels. Those applicable to the proposed project are described below.

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The following discussion describes relevant characteristics of the South Coast Air Basin (SCAB or Basin) and offers an overview of conditions affecting pollutant ambient air concentrations in the Basin.

Topography and Climate

The project site is located in the Basin, an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, in addition to the San Geronimo Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, which is a coastal plain with connecting broad valleys and low hills.

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

The Fontana Kaiser climate monitoring station (ID 043120) has been used to characterize project vicinity climate conditions. The average summer (July) high and low temperatures recorded at the Fontana Kaiser monitoring station are 95.0°F and 59.5°F, respectively, while the average winter (January) high and low temperatures are 66.4°F and 41.5°F, respectively. The average annual rainfall recorded at the Fontana Kaiser monitoring station is 18.81 inches. (Western Regional Climate Center n.d.)

The closest wind monitoring station to the project alignment is at the Ontario Airport. As such, data from the Ontario Airport wind monitoring station was used to characterize study area wind conditions. Wind patterns at the Ontario Airport station display a west-by-southwest directional flow from February through August and a westerly directional flow for the remainder of the year, with an annual average speed of 6.2 miles per hour (mph). Information on wind direction and speed for the Ontario Airport wind monitoring station is provided in Appendix C to the December 2017 *Air Quality Report*.

Description of Pollutants

The following is a general description of the pollutants for which there are standards (criteria pollutants) and ambient measurements. A description of toxic air contaminants (TACs) and naturally occurring asbestos (NOA), for which there are no standards, is also included. Ozone and its precursors, ROG and NO_x, sulfates, visibility reducing particles, NO₂, and PM₁₀, and

PM_{2.5} are considered to be regional pollutants because they or their precursors affect air quality on a regional scale. NO₂ reacts photochemically with ROG_s to form ozone, while PM₁₀ and PM_{2.5} can form from the chemical reaction of atmospheric chemicals, including NO_x, sulfates, nitrates, and ammonia. These processes can occur at some distance downwind of the source of pollutants. Pollutants such as CO, SO₂, lead, and particulate matter are considered to be local pollutants because they tend to disperse rapidly with distance from the source. Although PM₁₀ and PM_{2.5} are considered to be regional pollutants, they can also be localized pollutants because direct emissions of particulate matter from automobile exhaust can accumulate in the air locally near the emission source. **Table 2-60** provides references for the state and federal standards and the SCAB's attainment status for the pollutants. While summaries of health effects are provided under the general discussion of each pollutant below, more detailed discussions of health effects are provided in the December 2017 *Air Quality Report*.

Ozone

O₃ is a respiratory irritant that increases susceptibility to respiratory infections. It is also an oxidant that can cause substantial damage to vegetation and other materials.

O₃, which is a regional pollutant, is generally not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. O₃ precursors, which include ROG and NO_x, react in the atmosphere in the presence of sunlight to form O₃. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, O₃ is primarily a summer air pollution problem. In addition, photochemical reactions take time to occur, so high O₃ levels often occur downwind of the emission source.

The U.S. EPA revoked the federal 1-hour O₃ standard on June 15, 2005; however, the new federal 8-hour O₃ standard was promulgated effective from that same date. A state standard for O₃ has been established for the 1-hour and 8-hour averaging times. The state 1-hour and 8-hour O₃ standards are 0.09 part per million (ppm) and 0.070 ppm, respectively, not to be exceeded. The federal 8-hour O₃ standard is 0.070 ppm and is not to be exceeded more than three times in any three-year period.

On April 15, 2004, the U.S. EPA released its list of 8-hour O₃ nonattainment areas, together with the deadline for each nonattainment area to attain the standard. Areas with the highest 8-hour concentrations and the greatest number of days exceeding the new standard were given the longest time to reach attainment. The Basin was reclassified nonattainment extreme on May 5, 2010 (Federal Register (FR), Volume 75, Page 86). On October 1, 2015, the U.S. EPA revised the 2008 ozone NAAQS 8-hours standard 0.075 ppm by strengthening ground level ozone to 0.070 ppm. This Final Rule for ozone was published in 80 FR 65291 and is effective from December 28, 2015.

Table 2-60. Air Pollution Standards and Attainment Status of the South Coast Air Basin

Pollutant	Averaging Time	California Standard	California Attainment Status	National Standard	National Attainment Status and Classification
Ozone (O ₃)	1 Hour	0.09 ppm	Nonattainment	No Standard	N/A
	8 Hour	0.070 ppm	Nonattainment	0.070 ppm	Nonattainment, Extreme
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Attainment/Maintenance
	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	No Standard	N/A
Fine Particulate Matter (PM _{2.5})	24 Hour	No Standard	N/A	35 µg/m ³	Nonattainment, Moderate
	Annual Arithmetic Mean	12 µg/m ³	Nonattainment	12.0 µg/m ³	Nonattainment, Moderate
Carbon Monoxide (CO)	1 Hour	20 ppm	Attainment	35 ppm	Attainment
	8 Hour	9.0 ppm	Attainment	9 ppm	Attainment/Maintenance
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm	Attainment	100 ppb	Attainment/Maintenance
	Annual Arithmetic Mean	0.030 ppm	Attainment	0.053 ppm	Attainment/Maintenance
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm	Attainment	75 ppb	Attainment
	24 Hour	0.04 ppm	Attainment	0.14 ppm	Attainment
	Annual Arithmetic Mean	No Standard	N/A	0,030 ppm	Attainment
Lead (Pb)	30 Day Average	1.5 µg/m ³	Attainment	No Standard	N/A
	Calendar Quarter	No Standard	N/A	1.5 µg/m ³	Attainment
	Rolling 3-Month Average	No Standard	N/A	0.15 µg/m ³	Attainment (except for Los Angeles County portion, which is designated nonattainment)
Notes: N/A = not applicable ppm = parts per million ppb = parts per billion µg/m ³ = micrograms per cubic meter Source: California Air Resources Board, 2016a.					

Carbon Monoxide

CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. CO can cause health problems such as fatigue, headache, confusion, dizziness, and even death.

Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when a period of light winds combines with the formation of ground-level temperature inversions, typically from the evening through early morning. These conditions

result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

State and federal CO standards have been set for 1-hour and 8-hour averaging times. The state 1-hour standard is 20 ppm by volume, whereas the federal 1-hour standard is 35 ppm. Both the state and federal standard for the 8-hour averaging period is 9 ppm. The SCAB is designated as an attainment area for the state 1- and 8-hour CO standards and an attainment/maintenance area for both the federal 1- and 8-hour CO standards.

Nitrogen Dioxide

Nitrogen oxides are a family of highly reactive gases, including NO₂, that are primary precursors to the formation of ground-level O₃, reacting in the atmosphere to form acid rain. NO_x is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO₂ is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates.

NO_x can irritate and damage the lungs and lower resistance to respiratory infections such as influenza. The effects of short-term exposure are still unclear, but continued or frequent exposure to concentrations that are typically much higher than those normally found in the ambient air may cause increased incidence of acute respiratory illness in children. Health effects associated with NO_x are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may lead to eye and mucous membrane aggravation along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals as a result of production of particulate nitrates. Airborne NO_x also can impair visibility. NO_x is a major component of acid deposition in California. NO_x may affect both terrestrial and aquatic ecosystems. NO_x in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduces the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

The state NO₂ standards are 0.18 ppm as a 1-hour average and 0.030 ppm as an annual arithmetic mean. The federal NO₂ standards are 0.100 ppm as a 1-hour average and 0.053 ppm as an annual arithmetic mean. The SCAB is designated as an attainment area for both the state 1-hour and annual arithmetic mean NO₂ standards and an attainment/maintenance area for the federal 1-hour and annual arithmetic mean NO₂ standard.

Sulfur Oxides

SO_x gases are a family of colorless, pungent gases, including SO₂, that are formed primarily by combustion of sulfur-containing fossil fuels (mainly coal and oil), metal smelting, and other industrial processes. SO_x can react to form sulfates, which significantly reduce visibility. SO_x is a precursor to particulate matter formation, which is in nonattainment in the project area.

The major health concerns associated with exposure to high concentrations of SO_x include effects related to breathing, respiratory illness, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease. Major subgroups of the population that are most sensitive to SO_x are individuals with cardiovascular disease or chronic lung disease (such as

bronchitis or emphysema), children, and the elderly. Emissions of SO_x can also damage the foliage of trees and agricultural crops. Together, SO_x and NO_x are the major precursors to acid rain, which is associated with the acidification of lakes and streams and accelerated corrosion of buildings and monuments.

The state standards are 0.25 ppm for the 1-hour averaging period and 0.04 ppm for the 24-hour averaging period. The federal standards are 0.075 ppm for the 1-hour averaging period and 0.5 ppm for the 3-hour averaging period (75 FR 35520). The Basin is designated as an attainment area for both the state and federal standards.

Inhalable Particulate Matter

Particulates can damage human health and retard plant growth. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Particulates also reduce visibility and corrode materials. The federal and state ambient air quality standard for particulate matter applies to two classes of particulates: PM_{2.5} and PM₁₀. The state PM₁₀ standards are 50 micrograms per cubic meter (µg/m³) as a 24-hour average and 20 µg/m³ as an annual arithmetic mean. The federal PM₁₀ standard is 150 µg/m³ as a 24-hour average. For PM_{2.5}, the state has adopted a standard of 12 µg/m³ for the annual arithmetic mean. The federal PM_{2.5} standards are 35 µg/m³ for the 24-hour average and 12.0 µg/m³ for the annual arithmetic mean.

The SCAB is designated as a nonattainment area for both the state 24-hour and arithmetic mean PM₁₀ standards and an attainment/maintenance area for the federal 24-hour PM₁₀ standard. In addition, the SCAB is designated as a nonattainment area for the state annual arithmetic mean PM_{2.5} standard and a nonattainment area for both the federal 24-hour and annual arithmetic PM_{2.5} standards.

Lead

Lead is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Automobiles were once a major source of airborne lead because, prior to being phased out, lead was used as a gasoline additive to increase vehicle octane rating. However, in recent years, ambient concentrations of lead have dropped dramatically.

Short-term exposure to high levels of lead can cause vomiting, diarrhea, convulsions, coma, or even death. However, even small amounts of lead can be harmful, especially to infants, young children, and pregnant women. Symptoms of long-term exposure to lower levels of lead may be less noticeable, but still serious. Anemia is common, and damage to the nervous system may cause impaired mental function. Other symptoms are appetite loss, abdominal pain, constipation, fatigue, sleeplessness, irritability, and headache. Continued excessive exposure, as in an industrial setting, can affect the kidneys.

Lead exposure is most serious for young children because they absorb lead more easily than adults and are more susceptible to its harmful effects. Even low-level exposure may harm the intellectual development, behavior, size, and hearing of infants. During pregnancy, and especially in the last trimester, lead can cross the placenta and affect the fetus. Female workers exposed to high lead levels have more miscarriages and stillbirths.

The state lead standard is $1.5 \mu\text{g}/\text{m}^3$ over a 30-day average; the federal lead standards are $1.5 \mu\text{g}/\text{m}^3$ averaged over a calendar quarter and $0.15 \mu\text{g}/\text{m}^3$ as a rolling three-month average. The Riverside County portion of the SCAB is designated as attainment with respect to lead.

Mobile-source Air Toxics/Toxic Air Contaminants

TACs are pollutants that may result in an increase in mortality or serious illness or pose a present or potential hazard to human health. Health effects of TACs include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. In 1998, following a 10-year scientific assessment process, the ARB identified particulate matter from diesel-fueled engines as a TAC. Compared with other air toxics, ARB has identified and controlled, diesel particulate matter emissions are estimated to be responsible for about 70 percent of the total ambient air toxics risk (California ARB 2005).

Through the Clean Air Act Amendments (CAAA) 1990, Congress mandated U.S. EPA to regulate 188 air toxics, which are also known as hazardous air pollutants. In the U.S. EPA's latest final rule (2007) on the control of hazardous air pollutants from mobile sources (72 FR 8430), the agency identified 93 compounds that are emitted from mobile sources, which are listed in U.S. EPA's Integrated Risk Information System. From this list of 93 compounds, U.S. EPA has identified nine as priority MSATs. The high regulation priority of these nine mobile-source air toxics (MSATs) was based on EPA's 2011 National Air Toxics Assessment (FHWA 2016).

The nine priority MSATs are as follows:

- Acetaldehyde;
- Acrolein;
- Benzene;
- 1,3-Butadiene;
- Diesel particulate matter/diesel exhaust organic gases (DEOG);
- Ethylbenzene;
- Formaldehyde;
- Naphthalene; and
- Polycyclic organic matter (POM).

The 2007 rule requires controls that would dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using U.S. EPA's MOVES2014a model, even if vehicle activity (i.e., vehicle miles traveled [VMT]) increases by 45 percent, as assumed from 2010 to 2050, a combined reduction of 91 percent in the total annual emission rate for the priority MSATs is projected for the same time period (FHWA 2016).

Naturally Occurring Asbestos

NOA is a fibrous material found in certain types of rock formations. It results from natural geologic processes and is commonly found near earthquake faults in California. Some rock types known to produce asbestos fibers are varieties of chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite.

Asbestos is harmless when it is left undisturbed under the soil, but if it becomes airborne, it can cause serious health problems. Human disturbance, or natural weathering, can break asbestos down into microscopic fibers that are easily inhaled. Inhaling asbestos fibers can cause lung cancer, mesothelioma (a rare form of cancer found in the lining of internal organs), and asbestosis (a progressive, non-cancer disease of the lungs involving a buildup of scar tissue, which inhibits breathing) (U.S. EPA 2008a, 2008b).

Existing Air Quality Conditions

The project area is located in the southeastern portion of the Basin. The project is located primarily within two Source Receptor Areas (SRAs)⁸: SRA Number 32 (Northwest San Bernardino Valley) and SRA Number 33 (Southwest San Bernardino Valley). The monitoring station in SRA 32 is in Upland at 1350 San Bernardino Road (ARB 36175), located approximately 5.1 miles west of the project alignment. The Upland monitoring station measures O₃, CO, NO₂, PM₁₀, and PM_{2.5}.

Two monitoring stations have recorded pollutant concentrations in SRA 33 during the most recent three years: the now-closed Ontario-Fire Station monitoring station (ARB 36025) in 2013 and 2014, and the Ontario-Route 60 monitoring station (ARB 36036) in 2015. The Ontario Fire Station monitoring station, which recorded PM₁₀ and PM_{2.5} concentrations, is located approximately 4.1 miles west of the project alignment, and the Ontario-Route 60 monitoring station, which records PM_{2.5} and NO₂ concentrations, is located 3.9 miles west of the project alignment. Monitoring station locations are shown in **Figure 2-38**.

Table 2-61 summarizes air quality monitoring data from the Upland monitoring station and the Ontario monitoring stations during the last three years for which complete data are available (2013–2015). Given their proximity to the project area, all three of these monitoring stations are considered to be representative of the project vicinity's existing air quality.

Monitoring data show the following pollutant trends for the Upland monitoring station: the state 1-hour O₃ standard was exceeded 25 times during 2013, 34 times in 2014, and 49 times in 2015; the national 8-hour O₃ standard was exceeded 27 times during 2013, 42 times during 2014, and 53 times in 2015. CO and NO₂ concentrations are low and no exceedances were recorded during the three-year period. The monitoring data were insufficient to determine if the state 24-hour PM₁₀ standard was exceeded in the three-year reporting period, but there were no recorded exceedances of the national 24-hour PM₁₀ standard. The monitoring data were also insufficient to determine if the national 24-hour PM_{2.5} standard was exceeded during the three-year reporting period.

Monitoring data show the following trends for the stations in Ontario: the state 24 hour PM₁₀ standard was exceeded three times in 2013 and three times in 2014; the national 24-hour PM₁₀ standard was not exceeded during the 2013-2015 period. The national 24-hour PM_{2.5} standard was exceeded one time per year in 2013 and 2014 at the Ontario-Fire Station monitoring station and 10 times in 2015 at the Ontario-Route 60 location. Monitoring data were insufficient to determine if exceedances of the state and national ozone and carbon monoxide occurred.

⁸ SCAQMD has divided the Basin into smaller areas called "Source Receptor Areas." A map showing SRA delineations has been provided in Appendix C.

Figure 2-38. Monitoring Station Locations



Source: California Air Resources Board, 2016b; EPA, 2016.

Table 2-61. Air Quality Data from Upland (ARB 36175), Ontario-Fire Station (ARB 36025), and Ontario-Route 60 (ARB 36036) Monitoring Stations

Pollutant Standards	Upland			Ontario (Fire Station/Route 60)		
	2013	2014	2015	2013 ^a	2014 ^a	2015 ^a
Ozone (O₃)						
Maximum concentration 1-hour period (ppm)	0.143	0.126	0.136	--	--	--
Maximum concentration 8-hour period (ppm)	0.111	0.101	0.106	--	--	--
<i>Number of days standard exceeded</i>						
CAAQS 1-hour (>0.09 ppm)	25	34	49	--	--	--
CAAQS 8-hour (>0.070 ppm)	44	60	69	--	--	--
NAAQS 8-hour (> 0.070 ppm)	27	42	53	--	--	--
Carbon Monoxide (CO)						
Maximum concentration 8-hour period (ppm)	1.4	1.2	1.3	--	--	--
Maximum concentration 1-hour period (ppm)	3.0	2.9	2.1	--	--	--
<i>Number of days standard exceeded</i>						
NAAQS 8-hour (≥9 ppm)	0	0	0	--	--	--
CAAQS 8-hour (≥9.0 ppm)	0	0	0	--	--	--
NAAQS 1-hour (≥35 ppm)	0	0	0	--	--	--
CAAQS 1-hour (≥20 ppm)	0	0	0	--	--	--
Nitrogen Dioxide (NO₂)						
Annual average concentration	-	0.016	0.015	--	--	-
Maximum 1-hour concentration	0.0621	0.074	0.0716	--	--	0.0792
<i>Number of days standard exceeded</i>						
CAAQS (0.18 ppm)	0	0	0	--	--	0
NAAQS (0.100 ppm)	0	0	0	--	--	0
Suspended Particulates (PM₁₀)						
Maximum state 24-hour concentration (µg/m ³)	--	--	--	113.0	65.0	--
4 th highest state 24-hour concentration (µg/m ³)	--	--	--	50.0	49.0	--
Maximum national 24-hour concentration (µg/m ³)	96.8	80.8	77.7	117.0	67.0	--
4 th highest national 24-hour concentration (µg/m ³)	55.3	55.6	59.8	52.0	52.0	--
State annual average concentration (CAAQS = 20 µg/m ³)	--	--	--	33.9	--	--
<i>Number of days standard exceeded</i>						
CAAQS 24-hour (>50 µg/m ³) ^f	--	--	--	3	3	--
NAAQS 24-hour (>150 µg/m ³) ^f	0	0	0	0	0	--

Table 2-61. Air Quality Data from Upland (ARB 36175), Ontario-Fire Station (ARB 36025), and Ontario-Route 60 (ARB 36036) Monitoring Stations (continued)

Pollutant Standards	Upland			Ontario (Fire Station/Route 60)		
	2013	2014	2015	2013 ^a	2014 ^a	2015 ^a
Suspended Particulates (PM_{2.5})						
Maximum 24-hour concentration (µg/m ³)	83.2	40.0	73.4	49.3	38.4	52.7
4 th highest 24-hour concentration (µg/m ³)	44.5	35.8	43.1	26.6	29.6	47.9
24-hour Standard 98 th Percentile (µg/m ³)	--	--	--	--	--	49.0
National annual average concentration (µg/m ³)	--	--	--	--	--	14.4
State annual average concentration (µg/m ³)	16.5	--	16.0	--	--	14.5
<i>Number of days standard exceeded</i>						
NAAQS 24-Hour (35 µg/m ³)	--	--	--	1	1	10
<i>Exceed Annual Standard?</i>						
CAAQS (12 µg/m ³)	Yes	--	Yes	--	--	Yes
NAAQS (12.0 µg/m ³)	--	--	--	--	--	Yes
<p>Notes:</p> <p>All pollutant measurements retrieved from the ARB iADAM database except for CO measurements, which were retrieved from the EPA Monitor Values Report database. See Appendix C to the <i>I-15 CP Air Quality Report</i>, December 2017, for measurement data documentation.</p> <p>CAAQS = California Ambient Air Quality Standards.</p> <p>NAAQS = National Ambient Air Quality Standards.</p> <p>ppm = parts per million</p> <p>µg/m³ = micrograms per cubic meter</p> <p>^a The Ontario-Fire Station monitored pollutant concentrations in 2013 and 2014 before closing. The Ontario-Route 60 monitoring station recorded pollutant concentrations in 2015.</p> <p>-- = Insufficient data available to determine the value/Data not available.</p> <p>Source: California Air Resources Board, 2016b; EPA, 2016.</p>						

Sensitive Receptor Locations

Sensitive receptor locations are considered more susceptible to adverse impacts from air pollution than other locations and include schools, daycare facilities, elderly care establishments, medical facilities, and other areas that are populated with people considered more vulnerable to the effects of poor air quality.

In traffic-related studies evaluated by the ARB, additional non-cancer health risk attributable to freeway proximity was seen within 1,000 feet and was strongest within 300 feet. Furthermore, California freeway studies show about a 70 percent drop-off in particulate pollution levels at 500 feet. (California ARB 2005).

Sensitive receptors that include residences, schools, playgrounds, and child care facilities, among other sensitive land uses, are located throughout the approximately 14.7-mile project limits. Land use maps that identify sensitive receptor locations are provided in the December 2017 *Air Quality Report*.

2.2.6.3 Environmental Consequences

Regional Conformity

The Federal Clean Air Act (FCAA) Amendments of 1990 require that projects conform to the SIP and that direct and indirect emissions resulting from federal actions or funding do not produce new air quality violations or worsen existing violations. The FCAA specifically instructs U.S. EPA to develop guidelines for identifying when vehicle-related projects can increase local concentrations of CO, PM₁₀, and PM_{2.5} by altering traffic patterns. Regional conformity requirements generally apply only to emissions after completion of a project; they do not apply to construction emissions unless construction activity were to have a duration of more than five years.

U.S. EPA issued two sets of conformity procedure rules in November 1993. Transportation conformity procedures generally apply to highway and transit development and require that transportation plans, programs, and projects that are funded or approved under Title 23 of the USC or the FTA conform to state or federal air quality plans. General conformity procedures apply to all other types of development. Transportation conformity procedures require more detailed analysis for transportation projects than those required for non-transportation projects receiving federal funds or approval. SCAQMD adopted U.S. EPA's conformity rules as its own in its Regulation XIX, Rules 1901 and 1902.

In addition to 1) demonstrating that a proposed project has been identified in an approved FTIP and incorporated in a U.S. EPA-approved State Implementation Plan (SIP), or 2) demonstrating that a proposed project is exempt from conformity requirements, agencies constructing transportation projects must demonstrate that they do not exacerbate an existing violation of a National Ambient Air Quality Standards (NAAQS) or create a new exceedance.

With respect to the first criterion, the proposed project is included in the SCAG 2016–2040 RTP/SCS Amendment 1 and SCAG 2019 FTIP Amendment 1 under project numbers 4122006 and 20159901, respectively. The SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017 and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018.

As such, it can be concluded that the project's operational emissions meet the transportation conformity requirements imposed by EPA and SCAQMD. In addition, operations-period criteria pollutant emissions were quantified using the CT-EMFAC2014 emissions estimation model to ascertain how project-related changes to VMT and travel speeds affect regional emissions. A summary of mobile-source emissions estimates for Opening Year 2024 and Horizon Year 2045 is provided in **Table 2-62**. Modeling assumptions are based on the VMT and travel speed data that is detailed in the December 2017 *Air Quality Report*. CT-EMFAC2014 modeling output sheets are also provided in the December 2017 *Air Quality Report*.

Table 2-62. Project Area Mobile-Source Emissions

Evaluation Scenario	Criteria Pollutant Emissions in Pounds per Day				
	ROG	CO	NO _x	PM ₁₀	PM _{2.5}
Baseline Year 2014	604	8,387	3,766	356	175
Opening Year 2024					
No Build Alternative	296	3,713	895	361	149
Build Alternative	312	3,916	970	397	164
Increase/(Decrease) Compared to Baseline	(292)	(4,470)	(2,797)	41	(11)
Increase/(Decrease) Compared to No Build	16	204	75	36	15
Horizon Year 2045					
No Build Alternative	221	2,641	525	431	174
Build Alternative	233	2,901	507	526	212
Increase/(Decrease) Compared to No Build	12	269	(18)	95	38
SCAQMD Regional Significance Threshold ^a	55	550	55	150	55
EMFAC2014 model outputs and summary calculations are provided in the <i>I-15 CP Air Quality Report</i> , December 2017.					
^a Thresholds provided for information purposes only. Caltrans has not adopted nor recognize SCAQMD thresholds.					

Project-Level Conformity

Because the project vicinity is classified as a federal attainment/maintenance area for the pollutants CO and PM₁₀, and a federal nonattainment area for the pollutant PM_{2.5}, project-level CO and PM_{2.5}/PM₁₀ hot-spot analyses are required. These project-level analyses are presented below.

Localized Carbon Monoxide Hot-Spot Evaluation

The project was evaluated using the CO analysis protocol, which was described earlier (Garza et al. 1997). The CO protocol includes two flowcharts that illustrate when a detailed CO analysis needs to be prepared. The first flowchart, provided in Appendix B to the December 2017 *Air Quality Report*, is used to ascertain the CO modeling requirements for new projects. The questions relevant to the project (shown in the first flowchart), and the answers to those questions, are as follows.

3.1.1: Is the project exempt from all emissions analyses?

Response: No, the project does not qualify for an exemption. As shown in Table 1 of the CO protocol (provided in Appendix B to the December 2017 *Air Quality Report*), the proposed project does not fall into a project category that is exempt from all emissions analysis (proceed to 3.1.2).

3.1.2: Is the project exempt from regional emissions analyses?

Response: No, the project is not exempt from a regional emissions analysis. As shown in Table 2 of the CO protocol (provided in Appendix B to the December 2017 *Air Quality Report*), the proposed project does not meet the criteria of any of the project categories identified as exempt from regional emissions analysis (proceed to 3.1.3).

3.1.3: Is the project locally defined as regionally significant?

Response: Yes, SCAG defines the project as regionally significant (proceed to 3.1.4).

3.1.4: Is the project in a federal attainment area?

Response: No. The project alignment is located in the South Coast Air Basin, which is a federal attainment/maintenance area with respect to CO and PM₁₀; however, the Basin is classified nonattainment for pollutants O₃ and PM_{2.5}. If a project area is not classified attainment for all transportation-related criteria pollutants, the project is subject to a regional conformity determination (proceed to 3.1.5).

3.1.5: Is there a currently conforming RTP and RTIP?

Response: Yes, the SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017 and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018 (proceed to 3.1.6).

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

Response: Yes, the proposed project is listed in both the SCAG 2016–2040 RTP/SCS Amendment 1 and the SCAG 2019 FTIP Amendment 1 under project ID numbers 4122006 and 20159901, respectively. The SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017, and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018 (proceed to 3.1.7).

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

Response: No, neither the project design concept nor scope has changed from that in the regional analysis (proceed to 3.1.9).

3.1.9: The conclusion from this series of questions and answers is that the project needs to be examined for its local air impacts (proceed to Section 4, Figure 3 of CO protocol).

On the basis of the answers to the first flowchart, a second flowchart is used to determine the level of local CO impact analysis required for the project.

The questions applicable to the project in the second flowchart (also provided in Appendix B to the December 2017 *Air Quality Report*) and the answers to those questions are as follows:

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

Response: No, as shown previously in **Table 2-60**, the Basin is classified as an attainment/maintenance area for the federal CO standards. A summary of the most recent three years of monitored CO data was presented earlier in **Table 2-61**. The table provides CO monitoring data collected at the Upland (ARB No. 36175) monitoring station.

Level 1: Was the area redesignated as “attainment” after the 1990 Clean Air Act?

Response: Yes, the Basin was reclassified to attainment/maintenance from serious nonattainment, effective June 11, 2007.

Level 1: Has “continued attainment” been verified with the local Air District, if appropriate?

Response: Yes. Based on ambient air monitoring data collected by SCAQMD, the Basin has continually met the federal ambient air quality standards for CO since 2002. (Proceed to Level 7).

Level 7: Does project worsen air quality?

Response: Yes. According to Section 4.7.1 of the CO protocol, the following criteria provide a basis for determining whether a project has potential to worsen localized air quality:

- *The project significantly increases the percentage of vehicles operating in the cold start mode. Increasing the number of vehicles in cold start mode by as little as 2 percent should be considered potentially significant.*

Given the nature of the project, which is to add TEL in each direction within the project limits of an existing freeway, there would be no effect on the percentage of vehicles operating in the cold start mode.

- *The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5 percent should be considered potentially significant. Increasing the traffic volume by less than 5 percent may still be potentially significant if there is also a reduction in average speeds.*

As a result of project improvements, ADT volumes along the project limits are estimated to increase under the Build Alternative when compared to the No Build Alternative at both Opening Year 2024 and Horizon Year 2045. However, traffic flow would also improve under the Build Alternative when compared to the No Build Alternative. Under the Build Alternative, mainline segment traffic volumes are anticipated to increase between four and 13 percent at Opening Year 2024 and between 12 and 28 percent at Horizon Year 2045.

- *The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3–50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered a worsening of traffic flow.*

As discussed above under the preceding bullet point, traffic flow would improve along the uninterrupted project limits. With regard to interchange location improvements, the Build Alternative would include the reconstruction of the ramps at the Jurupa Street, I-10, Fourth Street, and Foothill Boulevard interchanges to accommodate the proposed improvements. Since the I-10 interchange is a grade-separated freeway interchange, this project-level CO analysis would focus on the three arterial roadway interchange locations.

Level 7: Is the project suspected of resulting in higher CO concentrations than those existing within the region at the time of attainment demonstration?

Note: The 2016 Air Quality Management Plan (AQMP) was adopted by the SCAQMD on March 3, 2017. Until the 2016 AQMP is approved by U.S. EPA, the Final 2012 AQMP is the currently conforming AQMP. No additional regional or hot-spot CO modeling was conducted to demonstrate further attainment of the 8-hour average CO standard since preparation of the 2003 AQMP. This is because SCAQMD submitted a request to EPA to redesignate the South Coast Air Basin as an attainment area for the 8-hour federal CO standard (South Coast Air Quality Management District 2007). Therefore, the 2003 AQMP is used as the basis for the following analysis. The 2003 AQMP did not provide model input assumptions. Instead, it refers to the 1992 CO Plan where a general description of input assumptions was provided (SCAQMD 2003).

Response: No. According to Section 4.7.2 of the CO Protocol, project sponsors are encouraged to use the following criteria to determine the potential for the project to result in higher CO concentrations than those existing within the region at the time of attainment demonstration:

- *The receptors at the location under study are at the same distance or farther from the traveled roadway than the receptors at the location where attainment has been demonstrated.*

A receptor distance of three meters (9.8 feet) from the traveled roadway was used in the CO attainment demonstration prepared for the 2003 AQMP. With respect to the proposed project, all sensitive receptors are located more than three meters from the traveled roadway.

- *The roadway geometry of the two locations is not significantly different. An example of a significant difference would be a larger number of lanes at the location under study compared to the location where attainment has been demonstrated.*

In the CO attainment demonstration prepared for the 2003 AQMP, four approach lanes in all directions were used to model the intersections at Wilshire/Veteran and La Cienega/Century (16 total lanes), while three approach lanes in all directions were used to model the intersections at Sunset/Highland and Long Beach/Imperial (12 total lanes). With respect to the proposed project, there would be three to four approach/through lanes under the proposed Build Alternative.

- *Expected worst-case meteorology at the location under study is the same or better than the worst-case meteorology at the location where attainment has been demonstrated. Relevant meteorological variables include: wind speed, wind direction, temperature, and stability class.*

In the CO attainment demonstration prepared for the 2003 AQMP, a wind speed of one meter per second, Stability Class D, and worst-case wind angle were used as modeling assumptions. These assumptions are considered worst-case, and, as such, the expected worst-case meteorology at the location under study would be the same or better. In addition, there is no meaningful difference in temperature between the attainment demonstration intersection locations and the proposed project intersection location.

- *Traffic lane volumes at the location under study are the same or lower than those at the location where attainment has been demonstrated.*

A comparison of the traffic volumes per lane used for modeling in the attainment plan demonstration and volumes per lane projected to occur at Build Alternative interchange

locations are provided in **Table 2-63** and **Table 2-64**, respectively. As shown in **Table 2-64**, Horizon Year 2045 approach/through lane traffic volumes during the peak hours under the Build Alternative would not exceed the highest attainment demonstration lane approach volumes of 1,238 at Wilshire/Veteran during the AM peak hour.

Table 2-63. Peak-Hour Approach Lane Volumes Used in the 2003 AQMP Attainment Demonstration

Location	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound AM/PM)	Northbound (AM/PM)
Wilshire & Veteran (4 lanes all directions)	1,238/517	458/829	180/350	140/233
Sunset & Highland (3 lanes all directions)	472/588	447/513	768/611	517/746
La Cienega & Century (4 lanes all directions)	635/561	473/682	346/507	205/419
Long Beach & Imperial (3 lanes all directions)	406/673	587/467	160/315	252/383
Source: SCAQMD, 2003.				

Table 2-64. Horizon Year Build Alternative Intersection Approach Lane Volumes

Location	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound AM/PM)	Northbound (AM/PM)
I-15 SB/Jurupa Street	240/80	497/166	265/66	48/12
I-15 NB/Jurupa Street	167/56	263/88	260/65	53/18
I-15 SB/Fourth Street	507/169	830/277	290/97	--/--
I-15 NB/Fourth Street	277/92	617/206	--/--	403/134
I-15 SB/Foothill Boulevard	270/90	317/106	440/147	--/--
I-15 NB/Foothill Boulevard	390/130	360/120	--/--	210/70
Source: WSP, 2017.				

- Percentage of vehicles operating in cold start mode at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated.

Both the attainment-area demonstration intersection locations (**Table 2-63**) and project-area intersection locations (**Table 2-64**) are all located along major, high-traffic roadways within the Basin. As such, vehicles operating in a cold start mode are expected to be similar at all locations.

- Percentage of heavy duty gas trucks at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated.

Heavy-duty gasoline trucks represented a small percentage of total truck volumes in 1992, and represents an even smaller percentage of truck volumes today. This trend is expected to perpetuate into the future.

- For projects involving intersections, average delay and queue length for each approach is the same or smaller for the intersection under study compared to those found in the intersection where attainment has been demonstrated.

As shown in **Table 2-63** and **Table 2-64**, future year 2045 approach lane traffic volumes during the AM and PM peak hours would be less than the worst-case intersection location of Wilshire/Veteran where attainment has been demonstrated.

- *Background concentration at the location under study is the same as or lower than the background concentration at the location where attainment has been demonstrated.*

As shown in **Table 2-61**, the most recently available background CO concentration in the project area was 1.3 ppm during year 2015 for the 8-hour averaging period. This compares to an 8-hour average maximum background concentration of 7.8 ppm (year 2005) used for the 2003 AQMP attainment demonstration. Background CO concentrations were 83 percent lower during year 2015 when compared to the 2005 background CO concentration used for attainment demonstration. Due to ongoing advancements in emissions control technology, this trend is expected to perpetuate into the future. As such, the 83 percent reduction in CO background concentration would more than offset the 69 percent increase in per lane traffic volumes discussed above.

On the basis of the screening criteria under Section 4.7.2 of the CO Protocol, all I-15 mainline segments can be screened out at this juncture and do not require further analysis. Project-level CO conformity determination requirements are satisfied.

Supplemental Analysis of Interstate 15 Mainline CO Concentrations

In addition to performing the project-level CO hot-spot analysis per the CO Protocol to satisfy project-level conformity requirements, a quantitative evaluation of I-15 mainline CO concentrations were also evaluated to satisfy project CEQA and NEPA environmental review requirements. The I-15 mainline segment of Jurupa Street to I-10 was selected for the quantitative CO hot-spot analysis for Opening Year 2024 and Horizon Year 2045, as the highest peak-hour volumes are predicted to occur along this segment. Because CO concentrations are a function of traffic volumes and emissions factors, the worst-case CO concentrations along all other I-15 segments within the project limits would be less than the CO concentrations predicted for the Jurupa Street to I-10 segment.

For dispersion modeling, each lane (11 lanes total) was assumed to be four meters wide, with an extra three meters added on each side of the freeway to account for the turbulence mixing zone generated by the vehicles wake as recommended in the CALINE4 manual (Benson 1989). Receptors were evaluated at three meters from roadway edge with a 1.8-meter receptor height. EMFAC2014 emissions factors for the SCAB portion of San Bernardino County were used for evaluation years 2024 (1.55 grams per mile at 5 mph) and 2045 (0.95 grams per mile at 5 mph). The SCAQMD estimates of future year CO background concentrations of 3.6 ppm (1-hour) and 2.9 ppm (8-hour) were used. A persistence factor of 0.7 was used to estimate 8-hour concentrations from the 1-hour modeling results. And, finally, peak hour traffic volumes were provided by WSP and approved by Caltrans District 8.

As shown below in **Table 2-65**, dispersion modeling predicted worst-case CO concentrations of 5.7 ppm and 4.4 ppm for the 1 hour and 8-hour concentrations, respectively, for Opening Year 2024. These concentrations would not exceed the CAAQS 1-hour and 8-hour concentrations of 20 ppm and 9.0 ppm, respectively. Note that modeled Opening Year 2024 concentrations were higher than the modeled Horizon Year 2045 concentrations, and that background concentrations were added to the worst-case 1-hour and 8-hour concentrations presented above. CALINE4 modeling outputs are provided in Appendix B to the December 2017 *Air Quality Report*.

Table 2-65. Prediction of Future I-15 Mainline CO Concentrations (parts per million)

Evaluation Year	1-Hour Concentrations			8-Hour Concentrations ^a		
	Background ^b	Project Contribution	Background plus Project Contribution	Background ^b	Project Contribution	Background plus Project Contribution
2024	3.6	2.1	5.7	2.9	1.5	4.4
2045	3.6	1.6	5.2	2.9	1.1	4.0
NAAQS/CAAQS	35 / 20			9 / 9.0		
Notes: ^a Persistence factor of 0.7 used to convert the 1-hour project contribution to the 8-hour project contribution per the Caltrans CO Protocol (Garza, 1997). ^b Background concentrations provided by SCAQMD. Modeling outputs are provided in the <i>I-15 CP Air Quality Report</i> , December 2017.						

Localized PM_{2.5} and PM₁₀ Hot-Spot Evaluation

Although nearly all projects create particulate emissions during construction, construction activities lasting five years or less are considered temporary impacts under the U.S. EPA transportation conformity rule and are exempt from project-level conformity analysis. It is expected that this project would be completed in approximately three years (2021–2024). As such, this project-level hot-spot analysis is limited to operational impacts. The EPA has specified a quantitative method for analyzing localized PM_{2.5} or PM₁₀ concentrations from operational traffic volumes, Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas (November 2015).

EPA specifies in 40 CFR 93.123(b)(1) that only “projects of air quality concern” (POAQC) are required to undergo a PM_{2.5} and PM₁₀ hot-spot analysis. EPA defines projects of air quality concern as certain highway and transit projects that involve significant levels of diesel traffic or any other project that is identified by the PM_{2.5} SIP as a localized air quality concern. A discussion of the proposed project compared to POAQCs, as defined by 40 FR 93.123(b)(1), is provided below.

1. **New or expanded highway projects that have a significant number of or significant increase in diesel vehicles.** The Build Alternative would involve adding Express Lanes to the existing I-15 mainline within project limits. Medium- and heavy-trucks would be excluded from Express Lanes use. While there would be increases in passenger vehicle and light truck traffic volumes within the I-15 project limits, no change in medium- or heavy truck volumes are foreseen to occur under the Build Alternative when compared to the No Build Alternative at Opening Year 2024 or Horizon Year 2045. Unlike passenger vehicle and light truck trips, heavy- and medium truck trips are generally not discretionary, and have very specific origins and destinations that are based on land use distribution patterns and available access options. The project-vicinity land uses that attract truck trips would be the same under the Build and No Build alternatives. Furthermore, the I-15 corridor would continue to be the only mainline route connecting the Inland Empire and Southern California metropolitan regions with the High Desert, Las Vegas, and beyond, under the Build Alternative and No Build Alternative. Due to the unique geographic characteristics of the area, there are simply no parallel highways that provide comparable direct road travel capability. For these reasons, no change in regional heavy- and medium trucks are anticipated to occur under the Build Alternative when compared to the No Build Alternative.

2. **Projects affecting intersections that are at Level of Service (LOS) D, E, or F with a significant number of diesel vehicles or those that would change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.** As discussed above, the Build Alternative would not increase the number of diesel vehicles operating in the project vicinity relative to the No Build Alternative at Opening Year 2024 or Horizon Year 2045. Furthermore, the Build Alternative would reduce congestion on the I-15 mainline at Opening Year 2024 and Horizon Year 2045 with project implementation.
3. **New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.** The proposed project has no bus or rail terminal component, and it would not alter travel patterns to/from any existing bus or rail terminal.
4. **Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.** The proposed project would not expand any bus terminal, rail terminal, or related transfer point that would increase the number of diesel vehicles congregating at any single location.
5. **Projects in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5}- or PM₁₀-applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.** The project site is not in or affecting an area or location identified in any PM₁₀ or PM_{2.5} implementation plan. The immediate project area is not considered to be a site of violation or possible violation.

The discussion provided above indicates that the proposed project would not be considered a POAQC, as defined by 40 CFR 93.123(b)(1). Therefore, a quantitative PM_{2.5} and PM₁₀ hot-spot evaluation is not required. The SCAG Transportation Conformity Working Group concurred with this determination after the July 26, 2016, meeting (TCWG 2016). A copy of all SCAG Transportation Conformity Working Group interagency consultation documentation related to this project-level PM analysis is provided in Appendix B to the December 2017 *Air Quality Report*. FCAA (40 CFR 93.116) requirements are therefore met. The project is not anticipated to cause local hot-spots by contributing to and/or violating any PM₁₀/ PM_{2.5} NAAQS.

Additionally, following the conclusion of the public circulation and review of the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, and after identification of the Preferred Alternative for the project, the Air Quality Conformity Analysis prepared for this project was transmitted to FHWA on July 2, 2018. On August 7, 2018 FHWA issued the required Air Quality Conformity Analysis determination letter for this project (See Appendix F for a record of the correspondence).

Supplemental Analysis of Re-Entrained Fugitive Dust

Fugitive dust emissions from vehicle travel on paved roads (i.e., re-entrained dust) can be calculated using the emission factor equation provided in the Fifth Edition of U.S. EPA's AP-42 emissions factor compilation document (U.S. EPA 2011). The specific equation can be found in Section 13.2.1 of the AP-42 document, which has been included in Appendix D to December 2017 *Air Quality Report*. The emissions factor equation requires the input of several site-specific variables such as particle size multiplier, roadway silt loading factor, average vehicle weight, and rainfall correlation factor. The variables used in the analysis for the proposed project were obtained based on research conducted by Midwest Research Institute while it was performing California silt-loading measurements (Muleski 1996).

Based on the EPA's AP-42 emission factor equation, re-entrained roadway emissions of PM₁₀ and PM_{2.5}, along the project limits of I-15 would increase by 9.9 percent under the Build Alternative in Opening Year 2024 and by 22.2 percent in Horizon Year 2045, compared to the No Build Alternative. Emissions would increase under the Build Alternative proportional to projected changes in I-15 mainline VMT. The emissions calculation worksheet is provided in Appendix D to the December 2017 *Air Quality Report*.

Construction (Short-term) Impacts

Construction is anticipated to begin in March 2021 and last approximately 36 months. Temporary construction emissions would result from grubbing/land clearing, grading/excavation, drainage/subgrade construction, paving, and the commuting patterns of construction workers. Pollutant emissions would vary daily, depending on the level of activity, specific operations, and prevailing weather. Construction phases would be sequential and would not overlap.

During construction, short-term degradation of air quality may occur because of the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment exhaust also are anticipated and would include CO, NOX, ROG, directly emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants (aka, MSATs), such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOX and ROG in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. Implementing the exhaust and fugitive dust emission control measures identified below would avoid and/or minimize any impacts on air quality. Construction emissions estimates are provided below in **Table 2-66**.

**Table 2-66. Estimate of Criteria Pollutant Emissions during Construction
(pounds per day)**

Construction Phase	ROG	CO	NO _x	PM ₁₀	PM _{2.5}
Grubbing and Clearing	1	13	12	8	2
Grading/Excavation	6	55	64	11	4
Drainage/Utilities/Sub-Grade	3	34	28	9	3
Paving	2	23	12	2	1
Daily Maximum Regional Emissions	6	55	64	11	4
SCAQMD Regional Emissions Daily Significance Threshold ^a	75	550	100	150	55
SCAQMD Localized Emissions Daily Significance Threshold ^{a,b}	N/A	1,328	148	14	6

Note: Construction phases would be sequential and would not overlap.

Detailed calculation assumptions are provided in Appendix D to the *I-15 CP Air Quality Report*, December 2017.

^a Thresholds provided for information purposes only. Caltrans has not adopted nor recognize SCAQMD thresholds.

^b ROG emissions have no SCAQMD Localized Emissions Threshold; SCAQMD SRAs 32 and 33, 1-acre disturbance, 50-meter receptor distance.

Construction Conformity

Construction activities would not last for more than five 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)).

Exhaust Emissions

The project would conform to Caltrans construction requirements, as specified in the Caltrans' Standard Specifications Section 14-9.02 (Air Pollution Control, 2015 Edition) and Section 14-11.04 (Dust Control, 2015 Edition), for asphalt concrete emissions and all earthwork, clearing and grubbing, and roadbed activities involving heavy construction equipment. The contractor would comply with all air pollution control ordinances and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances and statutes, specified in Section 11017 of the Government Code.

Particulate Emissions

SCAQMD Rule 403 (Fugitive Dust) requires that fugitive dust control measures be applied to all construction projects in the Basin, unless said project is specifically exempted by the rule. Construction projects that are classified as "large operations" (20 hectares [50 acres] or larger) are required to submit a fully executed Large Operation Notification Form (Form 403 N) to the Executive Office of the SCAQMD within seven days of qualifying as a large operation and to maintain daily records to document the specific control actions taken. The control measures incorporated in the Rule are available in the Rule 403 Implementation Handbook, and include maintenance of soil moisture and watering during earth-moving activities; application of dust suppressants, chemical stabilizers, or vegetative ground cover for disturbed surfaces; watering, restricting speeds, or application of chemical stabilizers to unpaved roads; application of chemical stabilizers, watering, temporary coverings, or three-sided enclosures to open storage piles; and any other equivalent fugitive dust control measures approved by the SCAQMD Executive Officer and U.S. EPA. In the event that the preceding control measures do not meet the applicable performance standards, contingency control measures for large operations would be implemented, including application of water or chemical stabilizers to disturbed surface areas prior to weekend, holidays, or inactivity; additional water application or chemical stabilizers prior to wind events; and covering all haul vehicles. All specific actions to be taken by the project related to fugitive dust control would be detailed in the Form 403 N to be approved by Executive Office of the SCAQMD. The project would disturb approximately 160 acres and is considered a large operation under the Rule's definition. As such, the project would be required to implement measures for each source of PM₁₀ emissions in addition to the requirements for large operations, as specified in the Rule 403 subsection (e).

Construction-period criteria pollutant emissions were quantified using the Road Construction Model, Version 8.1.0 (SMAQMD 2016). A summary of emissions estimates is provided in **Table 2-66**. Modeling assumptions, which include 15,500 cubic yards of excavation export, 265,000 cubic yards of imported fill materials, and compliance with SCAQMD Rule 403 (Fugitive Dust Control), are detailed in Appendix D to the December 2017 *Air Quality Report*. Implementing the exhaust and fugitive dust emission control measures identified above would avoid and/or minimize any impacts on air quality.

Diesel Particulate-Related Health Risk during Construction

Construction activities associated with the proposed project would be sporadic, transitory, and short-term in nature (i.e., approximately three years). The assessment of cancer risk typically is based on a 30-year exposure period. Because exposure to diesel exhaust would be well below the 30-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons.

Naturally Occurring Asbestos

Both U.S. EPA and ARB have issued guidance for reducing exposure to NOA. EPA's suggested measures include leaving NOA material undisturbed, covering or capping NOA material, limiting dust-generating activities, or excavating and disposing of NOA material. ARB has adopted Airborne Toxic Control Measures, which are required for road construction and maintenance projects, unless the project is found to be exempt. These measures include stabilizing unpaved surfaces subject to vehicle traffic, reducing vehicle speeds, wetting or chemically stabilizing storage piles, and eliminating track-out material from equipment (California ARB 2008).

Although NOA is common in certain counties of California, it is not likely to be found in the project vicinity of San Bernardino County or Riverside County (California Department of Conservation 2000).

Aerially Deposited Lead

ADL refers to lead deposited on highway shoulders from past leaded fuel vehicle emissions. Although leaded fuel has been prohibited in California since the 1980s, ADL may still be present in soils adjacent to highways in use prior to that time. It is Caltrans' policy to evaluate and investigate these unpaved areas when they would be affected by a project, to ensure that workers are properly protected from lead exposure through training and appropriate work practices, and to manage ADL-containing soils in compliance with all applicable laws and regulations while minimizing costs to the project and future state liability.

Odors

Project construction would require the use of heavy-duty equipment in the project area, which can generate odors through equipment exhaust. Construction exhaust odors would be temporary and rather localized, as odors would disperse as distance from the construction site increases. Nevertheless, some residences may experience an increase in odor, but this would be a temporary condition.

Mobile Source Air Toxics

With respect to the proposed project, the projected maximum AADT volumes at Horizon Year 2045 would be above the 140,000 to 150,000 AADT criterion established by FHWA for projects considered to have higher potential for MSAT effects. As such, the proposed project normally would be considered to be a project with higher potential MSAT effects. According to FHWA guidance, "projects with higher potential MSAT effects" have the potential for meaningful differences in VMT and related MSAT emissions among project alternatives.

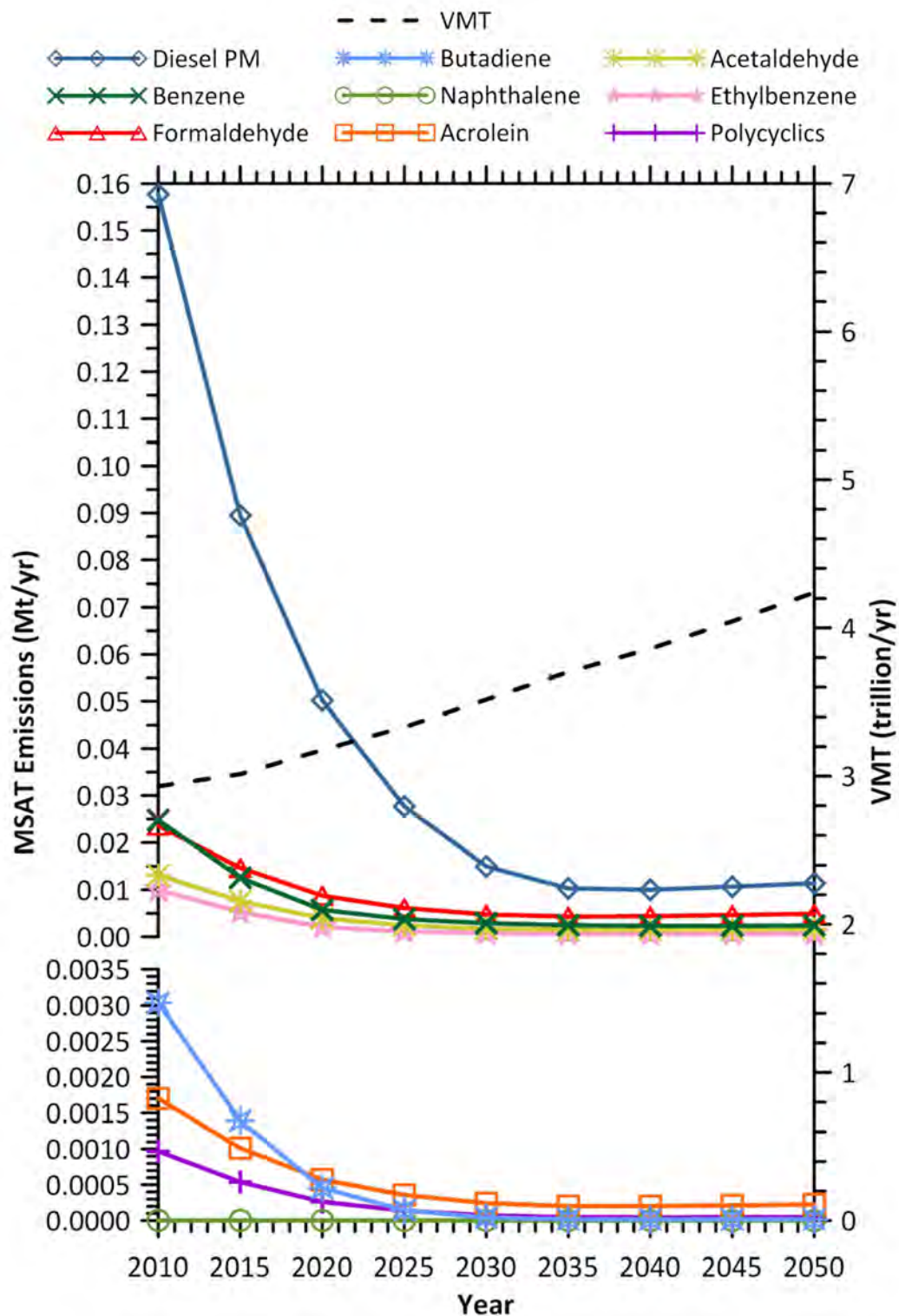
With respect to the proposed project, regional VMT at Horizon Year 2045 is anticipated to increase under the Build Alternative when compared to the No Build Alternative. Using the CT EMFAC2014 model, VMT and average speed data provided was used to estimate project MSAT emissions. A summary of Horizon Year 2045 VMT and related MSAT emissions among project alternatives is provided in **Table 2-67**. Baseline/Existing Year 2014 MSAT emissions are also shown in **Table 2-67**.

Table 2-67. Comparison of Years 2014 and 2045 MSAT Emissions in Grams per Day

MSAT Pollutant	Baseline Year 2014	Horizon Year 2045		
		No Build	Build Alternative	Net Change*
Benzene	6,285	2,035	2,188	153
Acrolein	224	56	68	12
Acetaldehyde	4,080	1,766	1,554	(212)
Formaldehyde	9,712	3,926	3,570	(356)
Butadiene	1,055	286	327	40
Naphthalene	318	126	130	4
POM	252	57	62	5
Diesel PM	24,261	1,540	1,729	189
DEOG	45,036	21,303	17,861	(3,442)
Total MSAT Emissions	91,224	31,095	27,487	(3,608)
Project Limits VMT	2,589,655	3,712,000	4,534,641	822,644
* Net Change is the difference between the Build Alternative and No Build Alternative; and is not a comparison to the Baseline Year 2014. Source: I-15 CP Air Quality Report, December 2017.				

Project-limits VMT under the Build Alternative is anticipated to increase compared to the No Build Alternative; however, overall MSAT emissions under the Build Alternative are estimated to decrease when compared to the No Build Alternative. Additionally, overall MSAT emissions at Horizon Year 2045 are anticipated to be considerably less than Baseline Year 2014 levels, even though VMT is anticipated to increase considerably. This result is consistent with the FHWA estimate that even if VMT increases by 45 percent from 2010 to 2050, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period (see **Figure 2-39**).

To comply with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22[b]) regarding incomplete or unavailable information, Appendix E to the December 2017 *Air Quality Report* contains a discussion regarding how air toxics analysis is an emerging field and current scientific techniques, tools, and data are not sufficient to estimate accurately the human health effects that would result from a transportation project in a way that would be useful to decision-makers. Also in compliance with 40 CFR 1502.22(b), Appendix E to December 2017 *Air Quality Report* contains a summary of current studies regarding the health effects of MSATs.

Figure 2-39. FHWA Projected National MSAT Emissions Trends 2010 – 2050

Source: FHWA, 2016.

Regardless of the alternative chosen, emissions would be lower than present levels at Horizon Year 2045 as a result of U.S. EPA's national control programs, which are projected to reduce annual MSAT emissions by more than 90 percent from 2010 to 2050. 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 U.S. 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 virtually all locations.

Under the Build Alternative, there would be localized areas where VMT would increase. Therefore, it is likely that localized increases in some MSAT emissions would occur under the Build Alternative when compared to the No Build Alternative. The localized increases in some MSAT emissions would be most pronounced along the I-15 mainline under the Build Alternative. However, even if these increases do occur, they too would be substantially reduced in the future due to implementation of U.S. EPA's vehicle and fuel regulations.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

Consistent with Caltrans standard practice and ARB and SCAQMD requirements, practices such as reducing idling time, proper maintenance of equipment, and fugitive dust control will be followed during the construction period. In addition, the following minimization measures will be implemented.

AQ-1 Use electricity from power poles, rather than temporary diesel- or gasoline powered generators if or where feasible.

AQ-2 Use on-site mobile equipment powered by alternative fuel sources (i.e., methanol, natural gas, propane, or butane) as feasible.

AQ-3 Use solar-powered portable changeable message signs.

AQ-4 Provide schools with advance notice of construction activity that is expected to occur within 1000 feet of the school property.

2.2.6.5 Climate Change

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. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

2.2.7 Noise

2.2.7.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless 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 the CEQA

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and the Department, 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). **Table 2-68** lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2-68. Noise Abatement Criteria

Activity Category	NAC, Hourly A- Weighted Noise Level, Leq(h)	Description of activity category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, 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.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 2-40 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.

Figure 2-40. Noise Levels of 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

According to the Department's Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011 (the Protocol), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be feasible and reasonable at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Department'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 is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance and the cost per benefited residence.

2.2.7.2 Affected Environment

The primary sources used in the preparation of this section are the July 2017 *Noise Study Report* and the July 2017 *Noise Abatement Decision Report*. Also used are the July 2018 *Addendum to the Noise Study Report* and the July 2018 *Addendum to the Noise Abatement Decision Report* prepared for the project after the circulation of the Initial Study with Proposed Mitigated Negative Declaration / Environmental Assessment.

Basics of Sound

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted or annoying sound that is typically associated with human activity and that interferes with normal activities. Sound levels are measured and expressed in decibels (dB). The human ear does not respond uniformly to sounds at all frequencies, being less sensitive to low and high frequencies than to medium frequencies, which correspond with human speech. In response, the A-weighted noise level (or scale) has been developed. This A-weighted sound level is called the "noise level," which is referenced in units of dBA. Noise is measured on a logarithmic scale; a doubling of sound energy results in a three-dBA increase in noise levels. The human ear, however, does not typically notice changes in noise levels of less than 3 dBA. The equivalent noise level (L_{eq}) is the average A weighted sound level measured over a given time interval. L_{eq} can be measured over any time period, but is typically measured for one-hour periods and is expressed as $L_{eq}(h)$.

Methodology

FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway at a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment of the highway. The following projects are also considered to be Type I projects:

- The addition of a through-traffic lane. This 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 addition of an auxiliary lane, except when the auxiliary lane is a turn lane;
- The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange,
- Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane,
- The addition of a new weigh station, rest stop, ride-share lot, or toll plaza or substantial alteration to such features.

The project is determined to be a Type I project under this definition, and therefore the entire project area, as defined in the environmental document, is a Type I project. Under 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, 23 CFR 772 requires that the project sponsor “consider” noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project as well as the identification of noise impacts for which no apparent solution is available.

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the project. Land uses in the project area were categorized by land use type; Activity Category, as defined in **Table 2-68**, Noise Abatement Criteria; and the extent of frequent human use. Noise measurements were conducted along the alignment using one Larson Davis Model LxT sound-level meter (SLM) and one Larson Davis Model 831 SLM (serial numbers 0004005 and 0003786, respectively). All procedures for conducting noise measurements required by the Caltrans’ Technical Noise Supplement (TeNS) were followed during field measurements. All relevant traffic data from each short-term measurement were classified and counted using video recordings and/or manual traffic counts gathered in the field for use in calibrating the project noise model.

Traffic noise levels were predicted using the FHWA Traffic Noise Model (TNM), version 2.5. This computer model is based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 1998a, 1998b). Key geometric inputs for the TNM were ground type and the locations of roadways, shielding features (e.g., topography and buildings), noise barriers, and receivers. Geometry associated with the following future projects was also included in the TNM modeling:

Interstate 15 Express Lanes Project

The environmental document for the I-15 Express Lanes Project (EA 08-0J0800) was certified in May 2016. The I-15 Express Lanes Project would be located in Area A. The project would construct one or two express lanes in each direction on I-15 in Riverside County between Post Mile 36.8 and Post Mile 51.4. The I-15 Express Lanes Project would construct one TEL in each direction from Cantu-Galleano Ranch Road (Eastvale/Jurupa Valley) to SR-60 by paving the unpaved median, with isolated outside widening at Riverside Avenue to maintain lane balance for the SR-60 WB loop connector.

Interstate 10 Corridor Project

The environmental document for the I-10 Corridor Project (EA 08-0C250) was approved by the SBCTA Board of Directors in July 2017. The project would be located between Areas C and D. The proposed I-10 Corridor Project would construct additional lanes along the I-10 corridor at the intersection of the I-15/I-10 interchange. The I-10 Corridor Project would also result in minor realignment of the connector ramps from I-15 to I-10. The ultimate design for I-10 may include direct connectors from the I-15 TEL lanes to the I-10 TEL lanes north and south of the interchange on the west side. For purposes of this analysis, however, these direct connectors have not been included because the design has not been finalized. No noise barriers are proposed as part of the I-10 Corridor Project in the vicinity of the I-15 interchange.

Baseline Road Interchange Project

Under existing conditions, including during field measurements, Baseline Road was under construction to improve the existing diamond interchange (EA 08-49710). The improvements include a partial cloverleaf design on the west side of the interchange, with a WB loop on-ramp and EB direct on-ramp from Baseline Road. Minor improvements would be made to the tight diamond configuration on east side of the interchange. A new noise barrier is included as abatement for this project. The barrier is located along the edge of the shoulder, from approximately Station 378+48 (Post Mile SBd 6.58) to Station 395+51 (Post Mile SBd 7.01) (see **Figure 2-41**, Sheets 18 and 19). For the purposes of this analysis, the Baseline Road interchange was modeled in its pre-construction condition under the existing conditions because the interchange improvements were under construction during this analysis. Improvements associated with the interchange were included in the Design Year Build and No Build conditions.

Duncan Canyon Interchange Project

Under existing conditions, including during field measurements, the Duncan Canyon Road improvements (EA 08-0H130) were completed. The interchange was open and receiving traffic. The improvements included completing the partial diamond ramp design by adding a NB on-ramp and a SB on-ramp from Duncan Canyon Road to I-15. Other improvements included widening the bridge over I-15. No barriers were included as abatement for the interchange project.

One other project was identified along the alignment which was included in the modeling. The Falcon Ridge Elementary School (shown in **Figure 2-41**) was under development during the modeling process. The geometric design for the school was included in the TNM model (modeled location M-274A) and the school was modeled to identify impacts during the design-year build conditions to determine if abatement was necessary.

For the purposes of the analysis, it was assumed (based on current Caltrans practices) that the GP lanes would have a maximum capacity of 1,850 vehicles per hour per lane (vphpl) at the design speed and that the TEL would have a maximum capacity of 1,600 vphpl. However, if traffic volumes presented in the traffic study along the mainline and TEL did not meet or exceed the maximum capacity (i.e., 1,850 and 1,600 vphpl, respectively), then the actual traffic volumes from the March 2017 *Traffic Study Report* were used in the TNM model.

Abatement was considered at any modeled receptors which approached or exceeded the NAC for the respective Land Use Activity Category or was predicted to have a substantial increase (12 dB or more increase during the Design Year relative to the existing traffic noise level). Abatement in the form of noise barriers, ranging in height from 8 through 14 feet at the edge of shoulder or 8 through 24 feet at the right of way, was considered in the analysis. The reasonable allowance for each noise barrier found to be feasible and meet the design goal (7 dB insertion loss) was calculated (based on \$92,000 per benefitted receptor) and compared to the engineer's cost to construct the noise barrier. If the reasonable allowance was within a 10 percent contingency of the cost to construct the barrier, the barrier was considered reasonable to construct and was conditionally included as abatement in this environmental document (conditional upon approval of the benefitted receptors during the voting process).

Existing Land Use and Project Study Areas

As required by the Protocol, all developed land uses were evaluated in the noise analysis. Land uses in the study area fall under Activity Categories B through G. However, the focus was on outdoor locations with frequent human use that would benefit from a lowered noise level. Accordingly, the impact analysis focused on locations with defined outdoor activity areas, such as residential backyards, athletic fields/playgrounds, outdoor eating areas, and recreational parks. Interior noise levels were considered at one noise-sensitive receptor (a vocational school represented by modeled location M-28 shown in **Figure 2-41**, Sheet 10) which did not have defined outdoor activity areas. Areas of frequent human use located along the project study corridor/alignment fall under Activity Categories A through D. The project study corridor was broken down into seven segments. Those seven segments and the land uses found along the project study corridor are shown in **Figure 2-41** and are discussed below:

- **Area A:** Area A (**Figure 2-41**, Sheets 1 through 4) is located south of the SR-60/I-15 interchange. The southern terminus of Area A is Bellegrave Avenue. Land uses located in this area are industrial and manufacturing facilities (Activity Category F) and undeveloped land (Activity Category G). The area is generally flat and at grade with the I-15 alignment.
- **Area B:** Area B (**Figure 2-41**, Sheets 4 through 7) is located north of the SR-60/I-15 interchange. The northern terminus is the Jurupa Street interchange. Land uses in this area are largely industrial and manufacturing facilities (Activity Category F) and undeveloped land (Activity Category G). Exterior commercial uses (Activity Category E) are located toward the northern terminus, along the NB Jurupa Street off-ramp. Activity Category C (parks and places of worship) is also located within this analysis area in the northwest quadrant of the I-15/SR-60 interchange. Within this area, the I-15 alignment is generally located on fill and at a higher grade than the surrounding land uses to the west and east. As the I-15 alignment approaches the Jurupa Street interchange, the adjacent land uses tend to come back to the same grade as the alignment.
- **Area C:** Area C (**Figure 2-41**, Sheets 7 through 9) is located north of the Jurupa Street interchange. The northern terminus is the I-10/I-15 interchange. Land uses located in this area are largely industrial and manufacturing facilities (Activity Category F) and undeveloped land (Activity Category G). One outdoor picnic area and an amusement park (Activity Category C) are located within this area, as are outdoor seating areas at a car dealerships (Activity Category E). Within this area, the I-15 alignment transitions to fill and is at a higher grade than the surrounding land uses.
- **Area D:** Area D (**Figure 2-41**, Sheets 9 through 15) is located north of the I-10/I-15 interchange. The northern terminus is the Foothill Boulevard interchange. Land uses in this area are largely industrial, manufacturing, retail, and parking lot facilities (Activity Category F) and undeveloped land (Activity Category G). Commercial land uses (Activity Category E), including an office, a hotel, and fast-food restaurants, are also located in this area. One school (Activity Category C/D) is located to the northwest of the I-15/I-10 interchange. The I-15 alignment is on fill and generally at a higher grade than the surrounding land uses.
- **Area E:** Area E (**Figure 2-41**, Sheets 15 through 18) is located north of the Foothill Boulevard interchange. The northern terminus is the Baseline Road interchange. Land uses in this area are largely residential (Activity Category B). A couple of commercial (Activity

Category E), industrial, retail, parking lot (Activity Category F), and undeveloped (Activity Category G) land uses are also located in the area. One church/school with outdoor sports fields (Activity Category C) is located along the NB I-15 on-ramp from Foothill Boulevard. The I-15 alignment is located on fill and at a higher grade than the surrounding land uses.

- **Area F:** Area F (**Figure 2-41**, Sheets 18 through 21) is located north of the Baseline Road interchange. The northern terminus is the SR-210/I-15 interchange. Land uses in this area are largely residential (Activity Category B) and hotel, restaurant (Activity Category E) and a park (Activity Category C) south of Victoria Street. North of Victoria Street, land uses are generally industrial, sidewalk (Activity Category F) or undeveloped (Activity Category G). One school (Activity Category C) is also located along the southbound I-15, north of Victoria Street. The I-15 alignment is located on fill and at a higher grade than the surrounding land uses.
- **Area G:** Area G (**Figure 2-41**, Sheets 21 through 28) is located north of the SR-210/I-15 interchange. The northern terminus is the project limits north of the Duncan Canyon Road interchange. Land uses in this area are largely a mix of residential uses (Activity Category B), commercial uses (Activity Category E), parking lot, sidewalk, one fire station use (Activity Category F) and undeveloped land (Activity Category G). One place of worship is located to the northeast of the I-15/SR-210 interchange, and one park is located to the southwest of the I-15/Duncan Canyon Road interchange (Activity Category C). One planned project (a school [Activity Category C/D]) is located south of the Duncan Canyon Road interchange, approximately 500 feet off the alignment (more information is included below). The I-15 alignment is generally at grade with the surrounding land uses.

Existing Noise Measurements

Noise measurements were conducted at 55 short-term (10 to 15 minutes in duration each) locations and eight long-term (i.e., measurements taken at 5-minute intervals for 24 hours or more) locations along the project alignment between October 6, 2015 through March 4, 2016 using Caltrans-approved methodology for measuring noise. The noise measurement locations are identified in **Figure 2-41**.

Noise monitoring sites (ST-1 through ST-28, ST-29A, ST-29B, and ST-30 through ST-54) were selected to be representative of ambient noise conditions near the I-15 project corridor. **Table 2-69** summarizes the results of the short-term noise monitoring conducted in the project study area.

Table 2-69. Summary of Short-Term Measurements

Receiver	Address	Land Uses/ Activity Category	Start Date/Time	Duration (minutes)	Leq (dBA)
ST-1	12087 Landon Drive, Mira Loma, CA	Manufacturing/F	3-24-2016/ 12:00 p.m.	10:00	71.3
			3-24-2016/ 12:11 p.m.	10:00	71.2
ST-2	Adjacent to 12300 Riverside Drive, Jurupa Valley, CA	Undeveloped/G	3-15-2016/ 12:43 p.m.	10:00	73.2
			3-15-2016/ 12:55 p.m.	10:00	71.5
ST-3	Adjacent to 12100 Riverside Drive, Jurupa Valley, CA	Undeveloped/G	3-15-2016/ 11:37 a.m.	12:00	65.8
			3-15-2016/ 11:57 a.m.	15:00	64.5
ST-4	3245 Corridor Drive, Eastvale, CA	Manufacturing/F	3-15-2016/ 10:33 a.m.	10:00	67.7
			3-15-2016/ 10:46 a.m.	10:00	67.8
ST-5	4551 E. Philadelphia St, Ontario, CA	Park/C	3-15-2016/ 9:38 a.m.	10:00	71.6
			3-15-2016/ 9:52 a.m.	10:00	71.8
ST-6	1925 Burgundy Place, Ontario, CA	Outdoor Seating/E	2-3-2016/ 10:22 a.m.	10:00	74.3 ¹
			2-3-2016/ 10:40 a.m.	10:00	72.6
			2-3-2016/ 10:56 a.m.	10:00	73.3
ST-7	1425 Toyota Way, Ontario, CA	Manufacturing/F	2-3-2016/ 11:55 a.m.	10:00	61.9
			2-3-2016/ 12:12 p.m.	10:00	60.7
ST-8	Adjacent to 4850 S Motor Lane, Ontario, CA	Undeveloped/G	2-4-2016/ 10:13 a.m.	12:00	63.1
			2-4-2016/ 10:28 a.m.	12:00	62.9
ST-9	North of 1155 S Wanamaker Ave, Ontario, CA	Park/C	2-4-2016/ 9:18 a.m.	10:00	64.8
			2-4-2016/ 9:32 a.m.	10:00	64.9
ST-10	1125 Kettering Dr, Ontario, CA	Commercial/E	2-3-2016/ 1:38 p.m.	10:00	68.4
			2-3-2016/ 1:51 p.m.	10:00	68.1
ST-11	4651 E, Brickell St, Ontario, CA	Manufacturing/F	3-24-2016/ 10:39 a.m.	10:00	69.6
			3-24-2016/ 10:51 a.m.	10:00	69.5
ST-12	4730 Ontario Mills Pkwy, Ontario, CA	School/C	2-25-2016/ 11:04 a.m.	10:00	65
			2-25-2016/ 11:28 a.m.	10:00	65.2

Table 2-69. Summary of Short-Term Measurements (continued)

Receiver	Address	Land Uses/ Activity Category	Start Date/Time	Duration (minutes)	L _{eq} (dBA)
ST-13	Adjacent to 4760 Mills Circuit, Ontario, CA	Parking Lot/F	2-25-2016/ 10:13 a.m.	10:00	64.6
			2-25-2016/ 10:33 a.m.	10:00	64.3
ST-14	980 Ontario Mills Drive, Ontario, CA	Commercial/E	2-25-2016/ 12:02 p.m.	10:00	65.3
			2-25-2016/ 12:18 p.m.	10:00	66.6
ST-15	11800 4th Street, Rancho Cucamonga, CA	Commercial/E	2-2-2016/ 2:38 p.m.	13:00	55.7
			2-2-2016/ 3:00 p.m.	12:00	56.0
ST-16	8998 Hyssop Drive, Rancho Cucamonga, CA	Manufacturing/F	2-2-2016/ 1:24 p.m.	11:00	72.2
			2-2-2016/ 1:42 p.m.	13:00	72.7
ST-17	8827 Rochester Ave, Rancho Cucamonga, CA	Outdoor Seating/E	2-2-2016/ 1:24 p.m.	11:00	64.1
			2-2-2016/ 1:42 p.m.	13:00	63.9
ST-18	12365 E Foothill Blvd, Rancho Cucamonga, CA	Retail Facilities/F	2-2-2016/ 11:24 a.m.	12:00	67.6
			2-2-2016/ 11:41 a.m.	15:00	67.1
ST-19	12499 E Foothill Blvd, Rancho Cucamonga, CA	Restaurant/E	2-2-2016/ 11:24 a.m.	15:00	57.4
			2-2-2016/ 11:41 a.m.	15:00	56.8
ST-20	12704 E Foothill Blvd, Rancho Cucamonga, CA	Parking Lot/F	2-2-2016/ 8:49 a.m.	10:00	63.2
			2-2-2016/ 9:04 a.m.	10:00	63.2
ST-21	7950 Etiwanda Ave, Rancho Cucamonga, CA	Recreation Area/C	1-28-2016/ 12:00 p.m.	10:00	53.8
			1-28-2016/ 12:13 p.m.	10:00	54.1
ST-22	7950 Etiwanda Ave, Rancho Cucamonga, CA	Recreation Area/C	1-28-2016/ 12:46 p.m.	15:00	55.6
			1-28-2016/ 1:04 p.m.	10:00	54.7
ST-23	7855 Kew Ave, Rancho Cucamonga, CA	Retail Facilities/F	2-2-2016/ 9:44 a.m.	15:00	66.2
			2-2-2016/ 10:07 a.m.	10:00	65.5
ST-24	Adjacent to 12906 Grape Harvest Dr, Rancho Cucamonga, CA	Sidewalk/F	1-28-2016/ 2:18 p.m.	10:00	64.5
			1-28-2016/ 2:31 p.m.	10:00	64.9

Table 2-69. Summary of Short-Term Measurements (continued)

Receiver	Address	Land Uses/ Activity Category	Start Date/Time	Duration (minutes)	L _{eq} (dBA)
ST-25	7677 Covey Run Ct, Rancho Cucamonga, CA	Residential/B	1-21-2016/ 2:35 p.m.	10:00	65.7
			1-21-2016/ 2:50 p.m.	10:00	66.3
ST-26	12958 Miller Ave, Rancho Cucamonga, CA	Residential/B	1-21-2016/ 3:47 p.m.	10:00	62.2
			1-21-2016/ 4:02 p.m.	10:00	62.5
ST-27	7446 Bungalow Way, Rancho Cucamonga, CA	Residential/B	1-21-2016/ 3:47 p.m.	10:00	60.8
			1-21-2016/ 4:02 p.m.	10:00	60.7
ST-28	7476 Pinot Place, Rancho Cucamonga, CA	Residential/B	1-21-2016/ 11:00 a.m.	15:00	61.7
			1-21-2016/ 11:25 a.m.	15:00	61.6
ST-29A	7331 Shelby Place, Rancho Cucamonga, CA	Residential/B	1-21-2016/ 12:30 p.m.	10:00	57.3
			1-21-2016/ 12:44 p.m.	10:00	57.7
ST-29B	7331 Shelby Place, Rancho Cucamonga, CA (2nd Floor Balcony)	Residential/B	1-21-2016/ 12:30 p.m.	10:00	59.9
			1-21-2016/ 12:44 p.m.	10:00	60.6
ST-30	7396 Lawrence Place, Fontana, CA	Residential/B	1-21-2016/ 11:00 a.m.	15:00	58.8
			1-21-2016/ 11:25 a.m.	15:00	58.5
ST-31	13079 Falling Oak Drive, Rancho Cucamonga, CA	Residential/B	10-8-2015/ 12:29 p.m.	10:00	59.2
			10-8-2015/ 12:42 p.m.	10:00	58.8
ST-32	Adjacent to 7141 Green Glen Court, Rancho Cucamonga, CA	Sidewalk/F	10-8-2015/ 12:29 p.m.	10:00	62.1
			10-8-2015/ 12:42 p.m.	10:00	63.1
ST-33	7161 East Avenue, Rancho Cucamonga, CA	Residential/B	10-8-2015/ 11:32 a.m.	10:00	61.1
			10-8-2015/ 11:47 a.m.	10:00	59.5
ST-34	13500 Baseline Road, Fontana, CA	Hotel/E	10-8-2015/ 9:50 a.m.	10:00	61.9
			10-8-2015/ 10:06 a.m.	10:00	62.3
ST-35	7138 Marysville Place, Fontana, CA	Residential/B	10-8-2015/ 9:50 a.m.	10:00	57.8
			10-8-2015/ 10:06 a.m.	10:00	58.5

Table 2-69. Summary of Short-Term Measurements (continued)

Receiver	Address	Land Uses/ Activity Category	Start Date/Time	Duration (minutes)	L _{eq} (dBA)
ST-36	13551 Williamson Road, Rancho Cucamonga, CA	Residential/B	10-7-2015/ 3:06 p.m.	10:00	61.4
			10-8-2015/ 3:18 p.m.	10:00	61.6
ST-37	13611 Victoria Street, Rancho Cucamonga, CA	Residential/B	10-7-2015/ 3:06 p.m.	10:00	68.4
			10-8-2015/ 3:18 p.m.	10:00	68.4
ST-38	13500 Victoria Street, Rancho Cucamonga, CA	School/C	10-7-2015/ 1:46 p.m.	10:00	64.6
			10-7-2015/ 1:58 p.m.	10:00	63.8
ST-39	Adjacent to 13892 Victoria Street, Fontana, CA	Parking Lot/F	10-7-2015/ 1:46 p.m.	10:00	68.8
			10-7-2015/ 1:58 p.m.	10:00	69.1
ST-40	Adjacent to 13763 Smokestone Street, Rancho Cucamonga, CA	Sidewalk/F	10-7-2015/ 12:45 p.m.	10:00	55.0
			10-7-2015/ 1:02 p.m.	10:00	54.4
ST-41	6101 Cherry Avenue, Fontana, CA	School/C	10-7-2015/ 10:46 a.m.	10:00	63.3
			10-7-2015/ 11:23 a.m.	10:00	62.6
ST-42	Vacant land adjacent to 14940 Summit Avenue, Fontana, CA	Undeveloped Land/G	10-7-2015/ 9:08 a.m.	10:00	64.3
			10-7-2015/ 9:22 a.m.	10:00	65.6
ST-43	14839 Saddlepeak Drive, Fontana, CA	Residential/B	10-6-2015/ 10:47 a.m.	11:00	58.7
			10-6-2015/ 11:01 a.m.	10:00	59.0
ST-44	Adjacent to 15248 Summit Avenue, Fontana, CA	Retail Facilities/F	10-6-2015/ 9:38 a.m.	10:00	74.6
			10-6-2015/ 9:53 a.m.	10:00	74.8
ST-45	Adjacent to 15031 Mustang Lane, Fontana, CA	Sidewalk/F	10-6-2015/ 3:03 p.m.	10:00	65.8
			10-6-2015/ 3:17 p.m.	10:00	67.0
ST-46	Adjacent to 5431 Osprey Court, Fontana, CA	Sidewalk/F	10-6-2015/ 1:20 p.m.	10:00	62.1
			10-6-2015/ 1:33 p.m.	10:00	61.7
ST-47	15236 Fox Ridge Drive, Fontana, CA	Residential/B	10-6-2015/ 12:30 p.m.	10:00	59.4
			10-6-2015/ 12:44 p.m.	10:00	58.1

Table 2-69. Summary of Short-Term Measurements (continued)

Receiver	Address	Land Uses/ Activity Category	Start Date/Time	Duration (minutes)	L _{eq} (dBA)
ST-48	Open field west of Lytle Creek Road	Undeveloped Land/G	3-2-2016/ 2:37 p.m.	10:00	67.2 ³
			3-2-2016/ 2:48 p.m.	10:00	68.4
			3-2-2016/ 3:00 p.m.	10:00	68.3
ST-49	Adjacent to 5243 Starling Street, Fontana, CA	Undeveloped Land/G	3-2-2016/ 11:49 a.m.	10:00	69.1
			3-2-2016/ 12:02 p.m.	10:00	69.4
ST-50	15371 Petunia Street, Fontana, CA	Residential/B	3-2-2016/ 1:14 p.m.	10:00	62.1
			3-2-2016/ 1:45 p.m.	10:00	62.4
ST-51	15473 Petunia Street, Fontana, CA	Residential/B	3-2-2016/ 10:41 a.m.	10:00	53.6
			3-2-2016/ 10:53 a.m.	10:00	54.5
ST-52	5065 Coyote Canyon Road, Fontana, CA	Recreation Area/C	3-2-2016/ 12:31 p.m.	11:00	63.4
			3-2-2016/ 12:44 p.m.	10:00	63.4
ST-53	4857 Hawk Ridge Avenue, Fontana, CA	Residential/B	3-2-2016/ 9:41 a.m.	10:00	48.7
			3-2-2016/ 9:54 a.m.	10:00	47.2
ST-54	Open field north of Duncan Canyon Road	Undeveloped Land/G	3-2-2016/ 8:49 a.m.	10:00	71.8
			3-2-2016/ 9:01 a.m.	10:00	72.2

¹ A total of three separate measurements were taken at the ST-6 location because measured noise levels for the first two measurements differed by nearly 2 dB. ST-6 Run 2 and Run 3 were used for calibration because their measured noise levels were mostly in agreement. ST-6 Run 1 would not be used for calibration purposes.

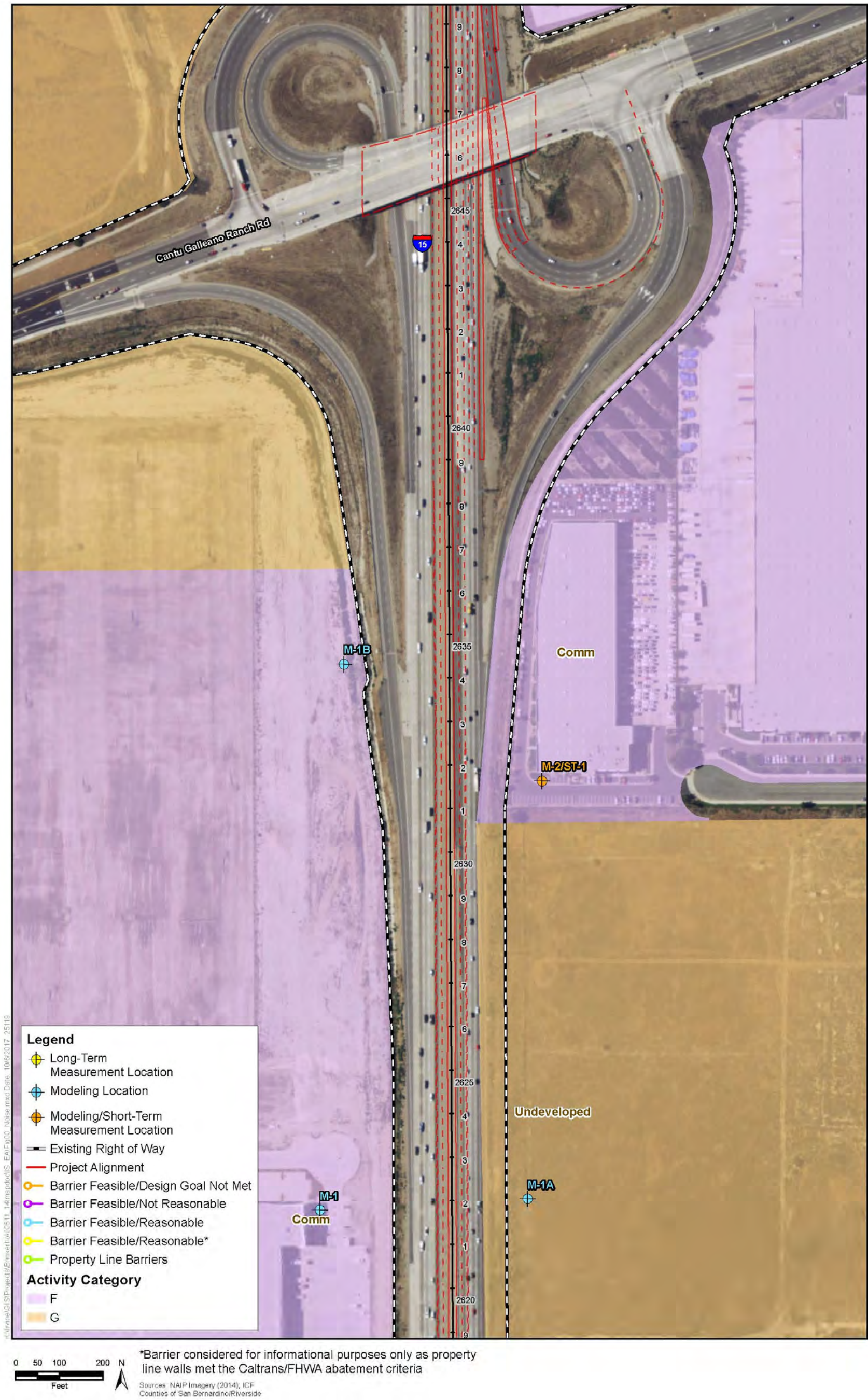
² Traffic volumes during measurement were hand tallied by ICF staff members in the field and then scaled into the equivalent hourly traffic volumes.

³ A total of three separate measurements were taken at the ST-48 location because of high wind speeds (≈7 mph) during Run 1. ST-48 was located in an open field and, therefore, was more sensitive to wind speeds than most other measurement locations. ST-48 Run 2 and Run 3 were used for calibration because their measured noise levels were mostly in agreement, and wind speeds were lower. ST-48 Run 1 would not be used for calibration purposes.

Source: ICF, 2016.

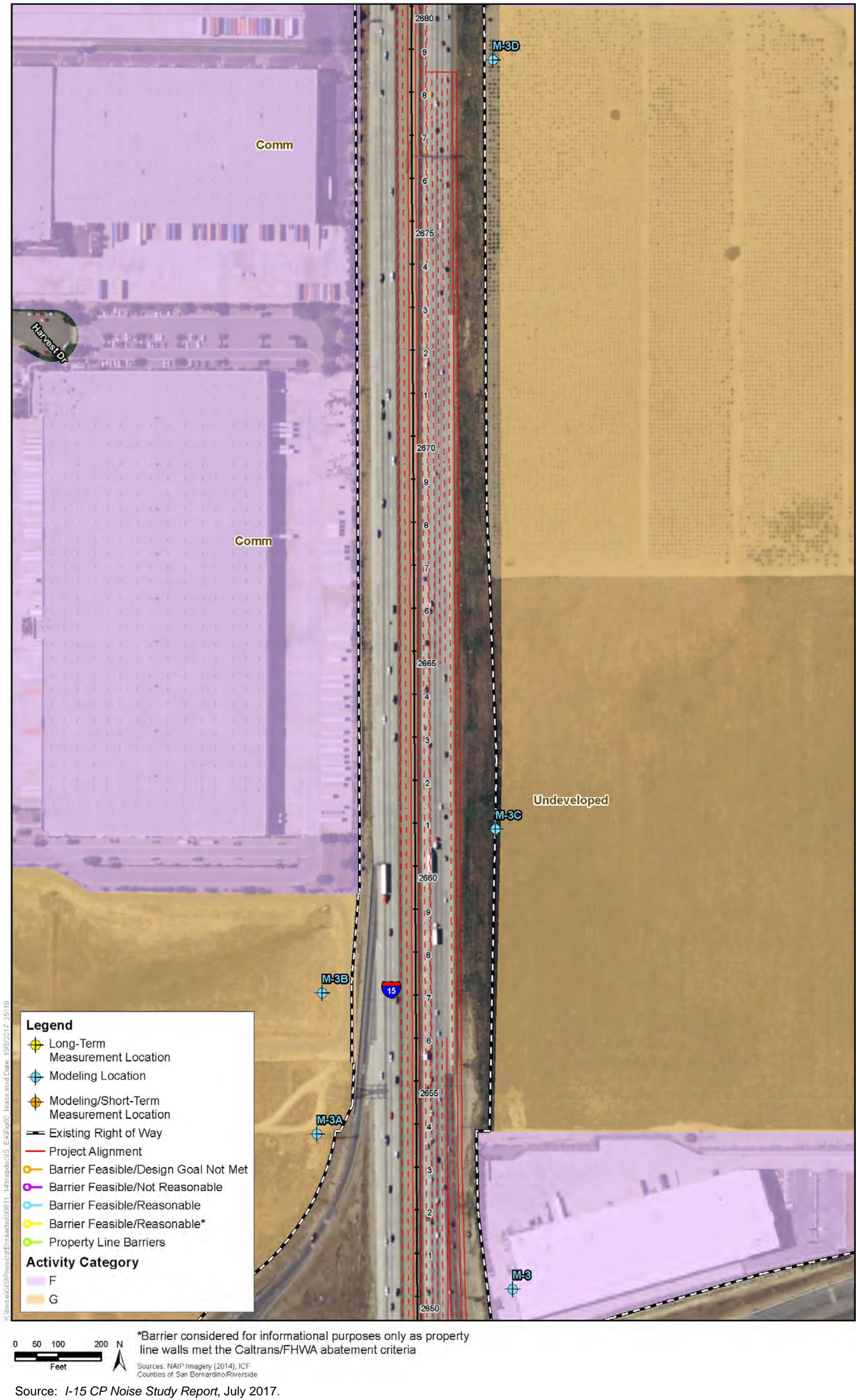
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 1



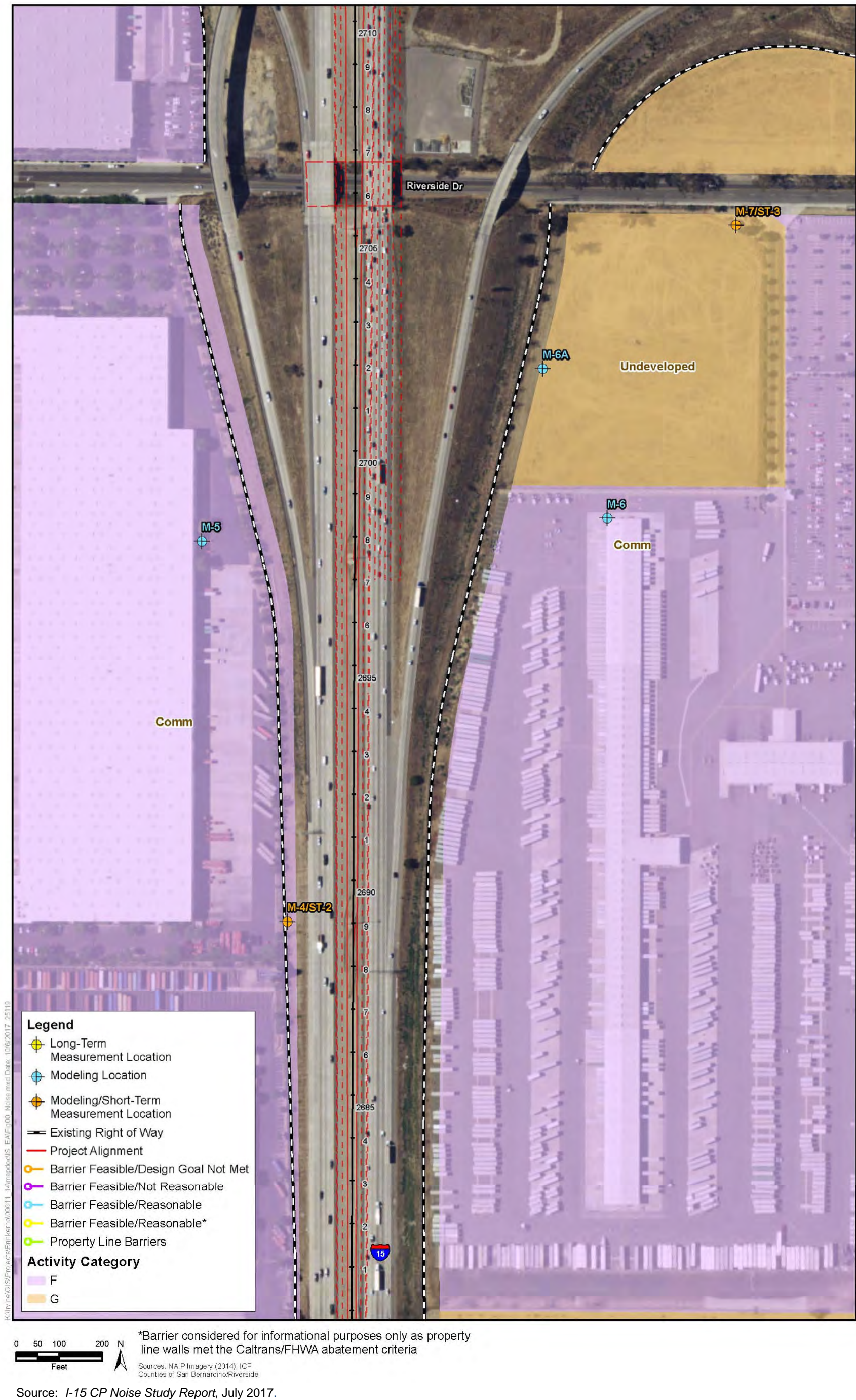
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 2



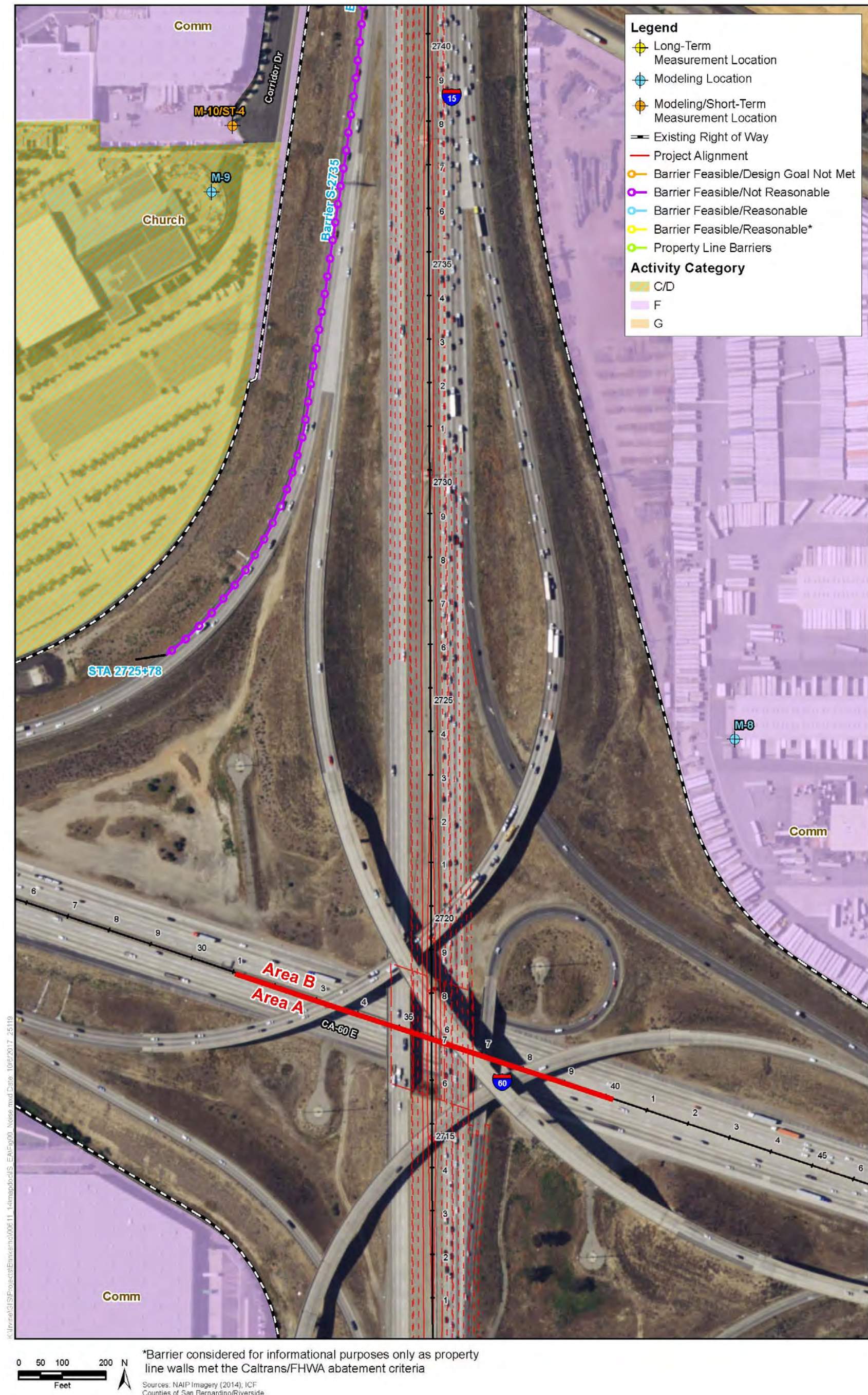
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 3



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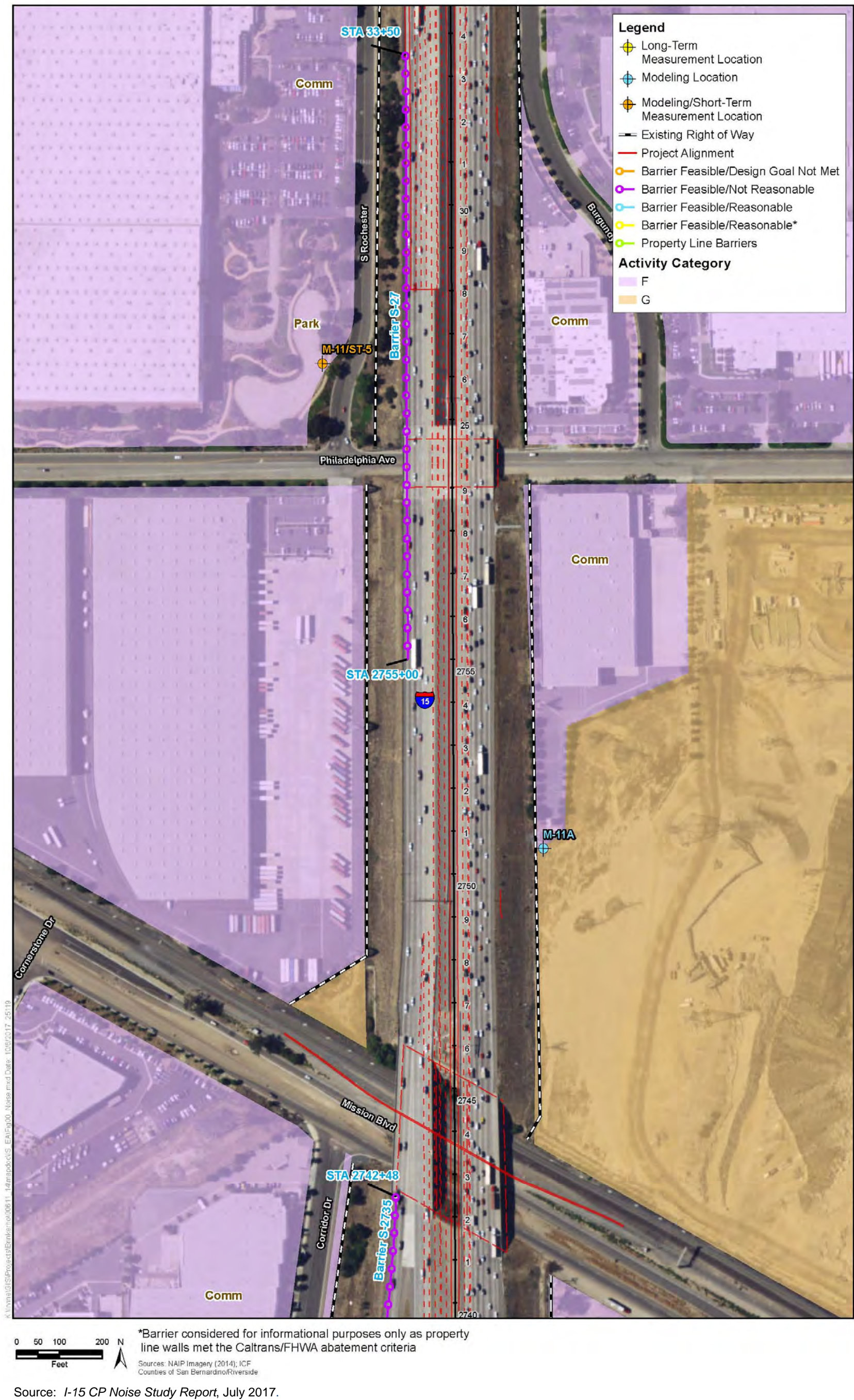
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 4



Source: I-15 CP Noise Study Report, July 2017.

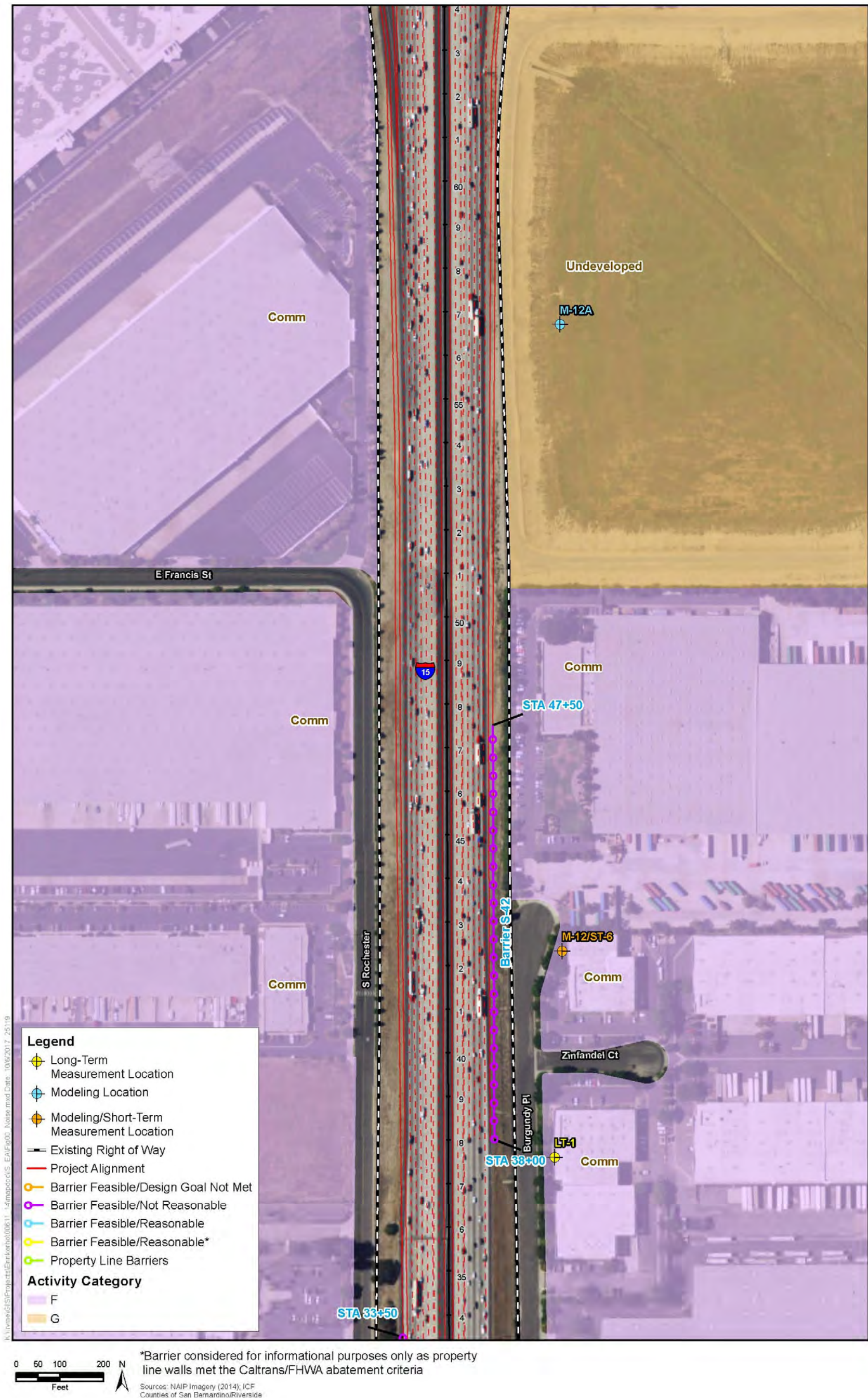
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 5



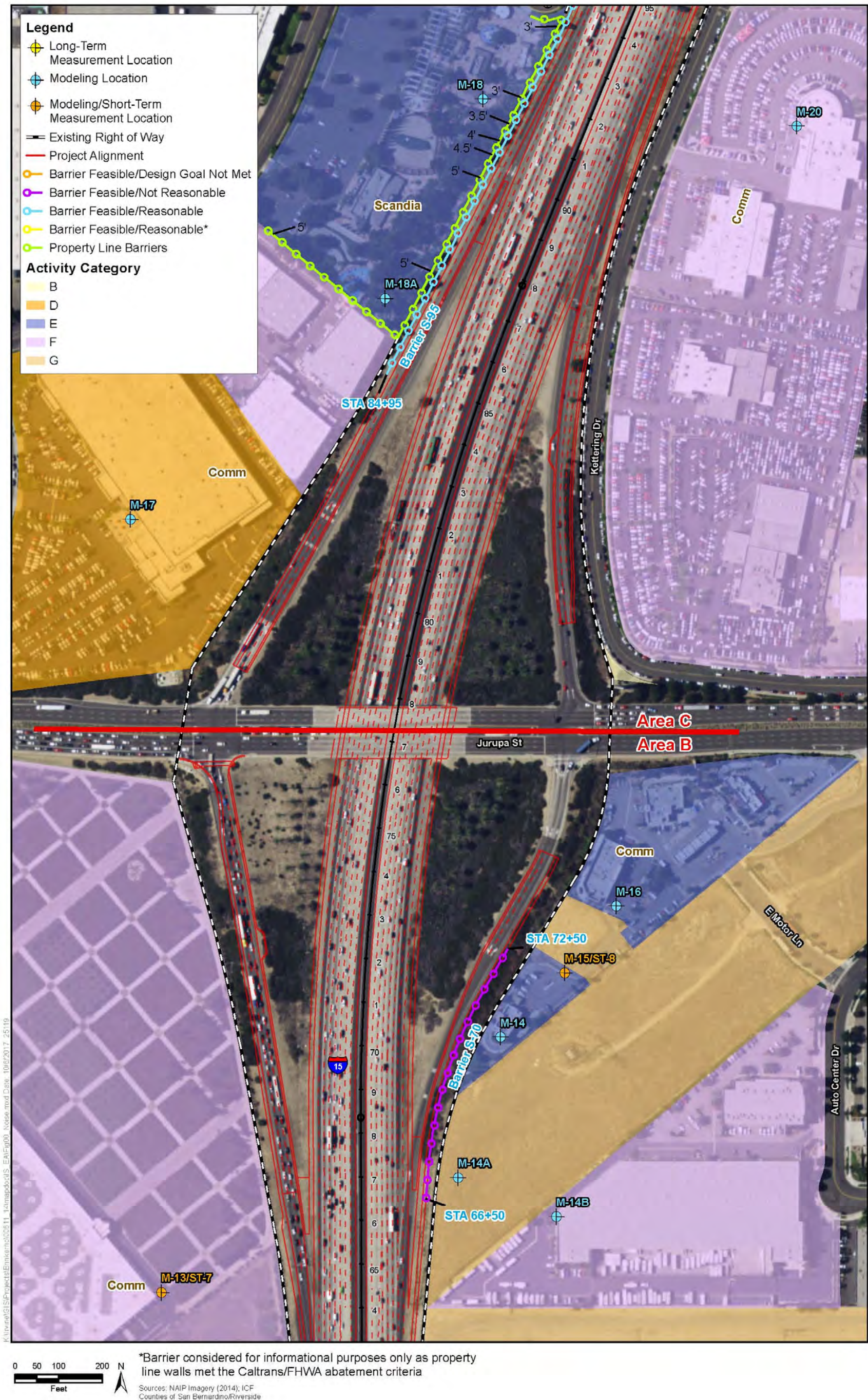
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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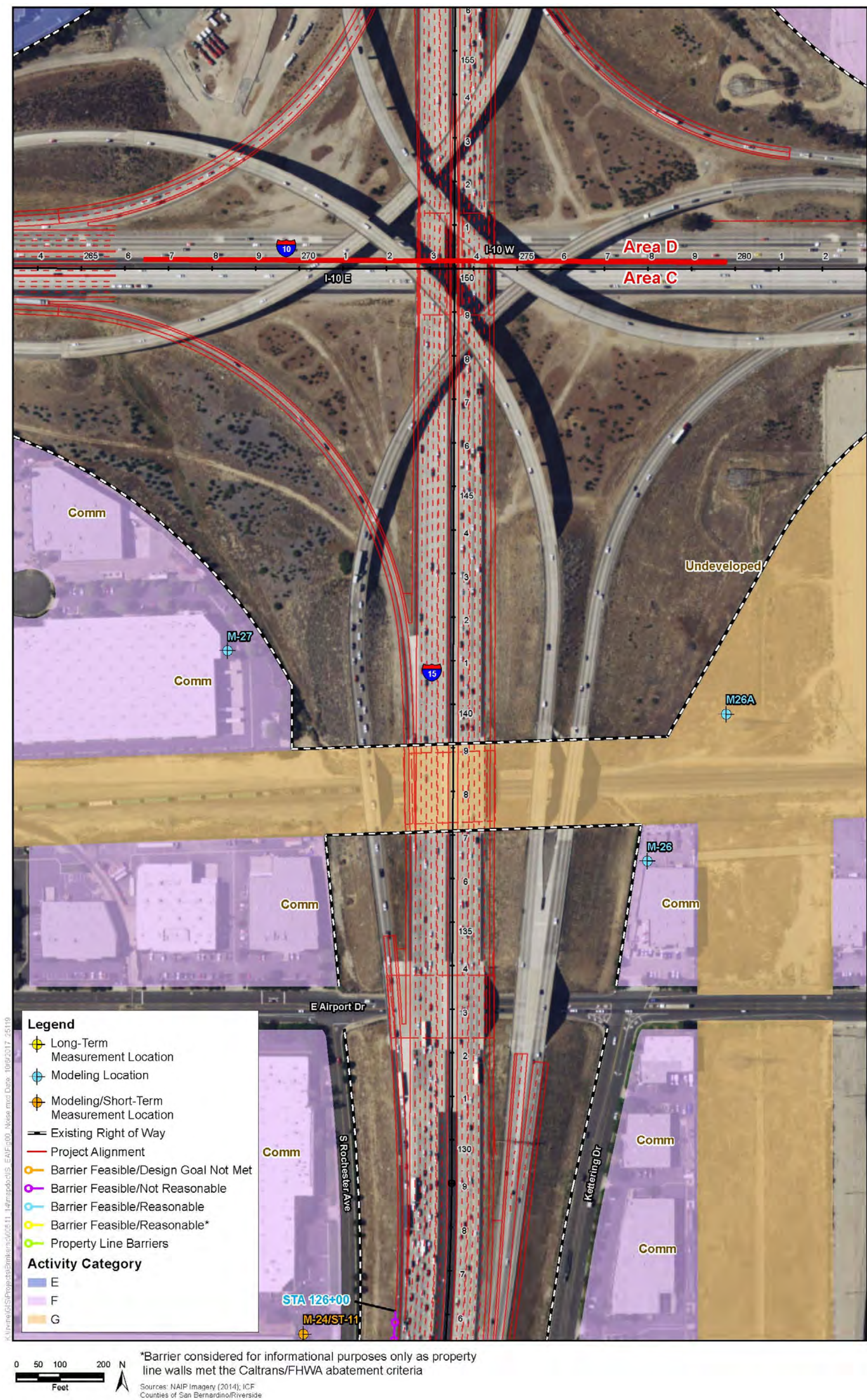
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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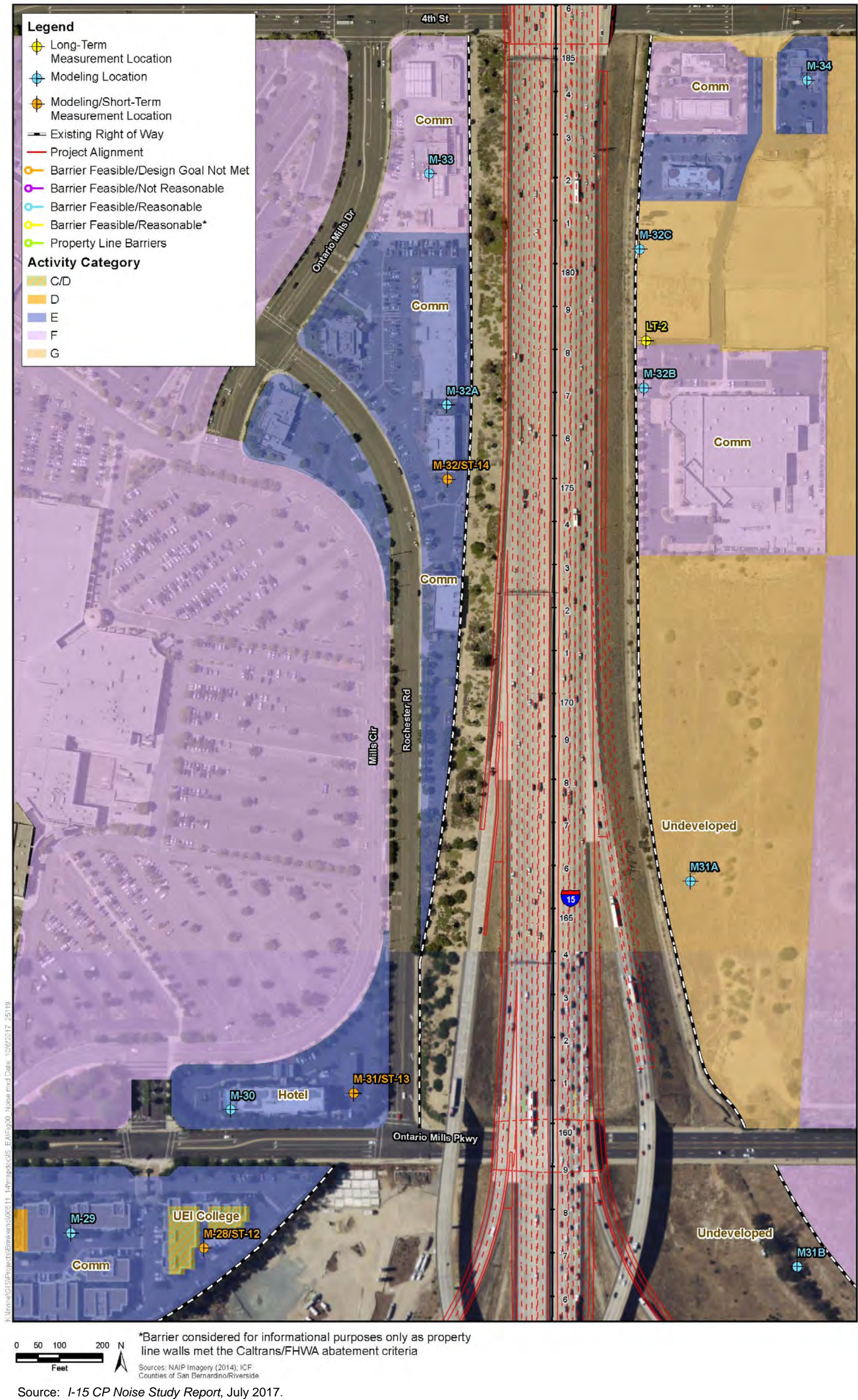
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Source: I-15 CP Noise Study Report, July 2017.

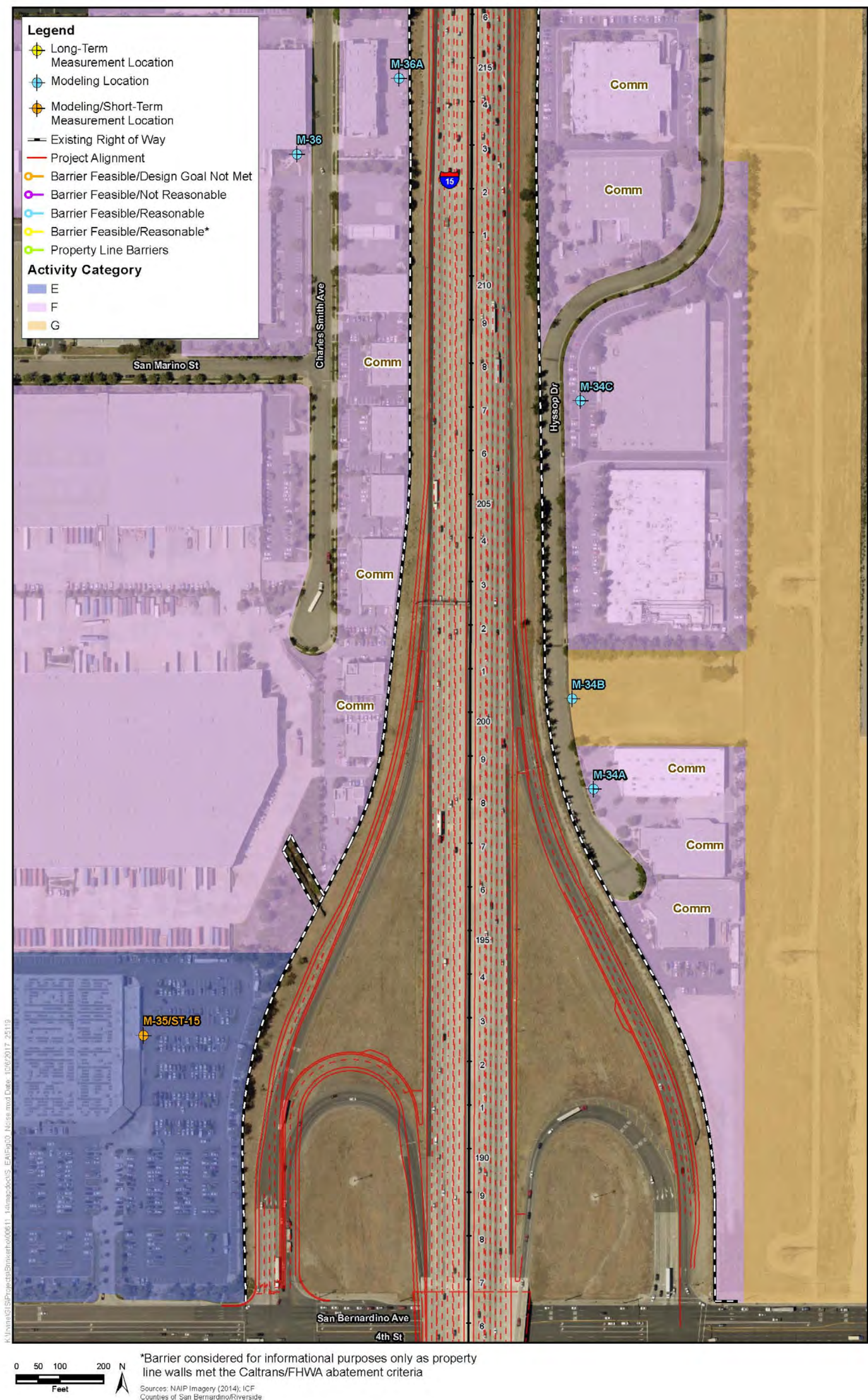
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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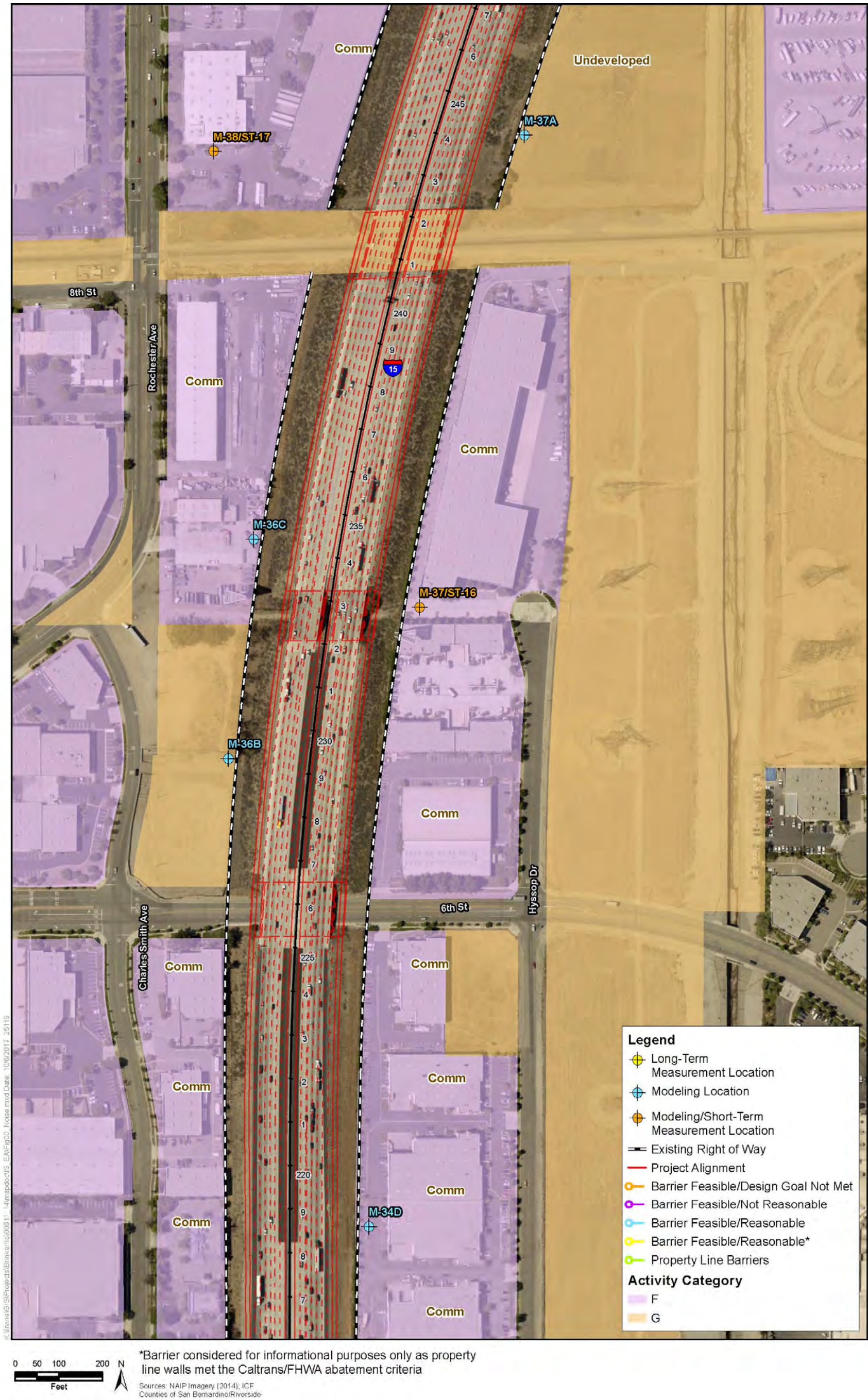
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 11



Source: I-15 CP Noise Study Report, July 2017.

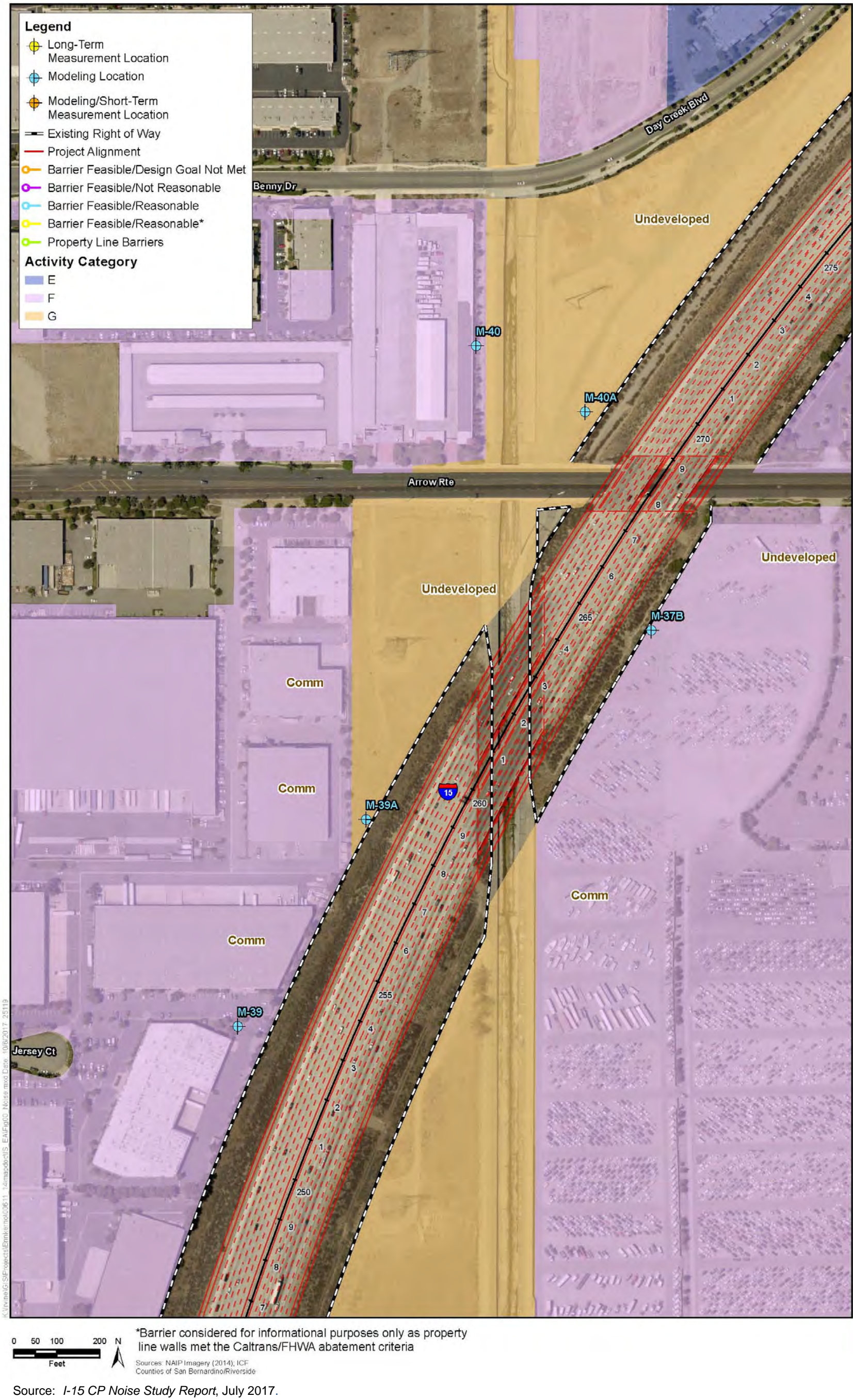
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 12



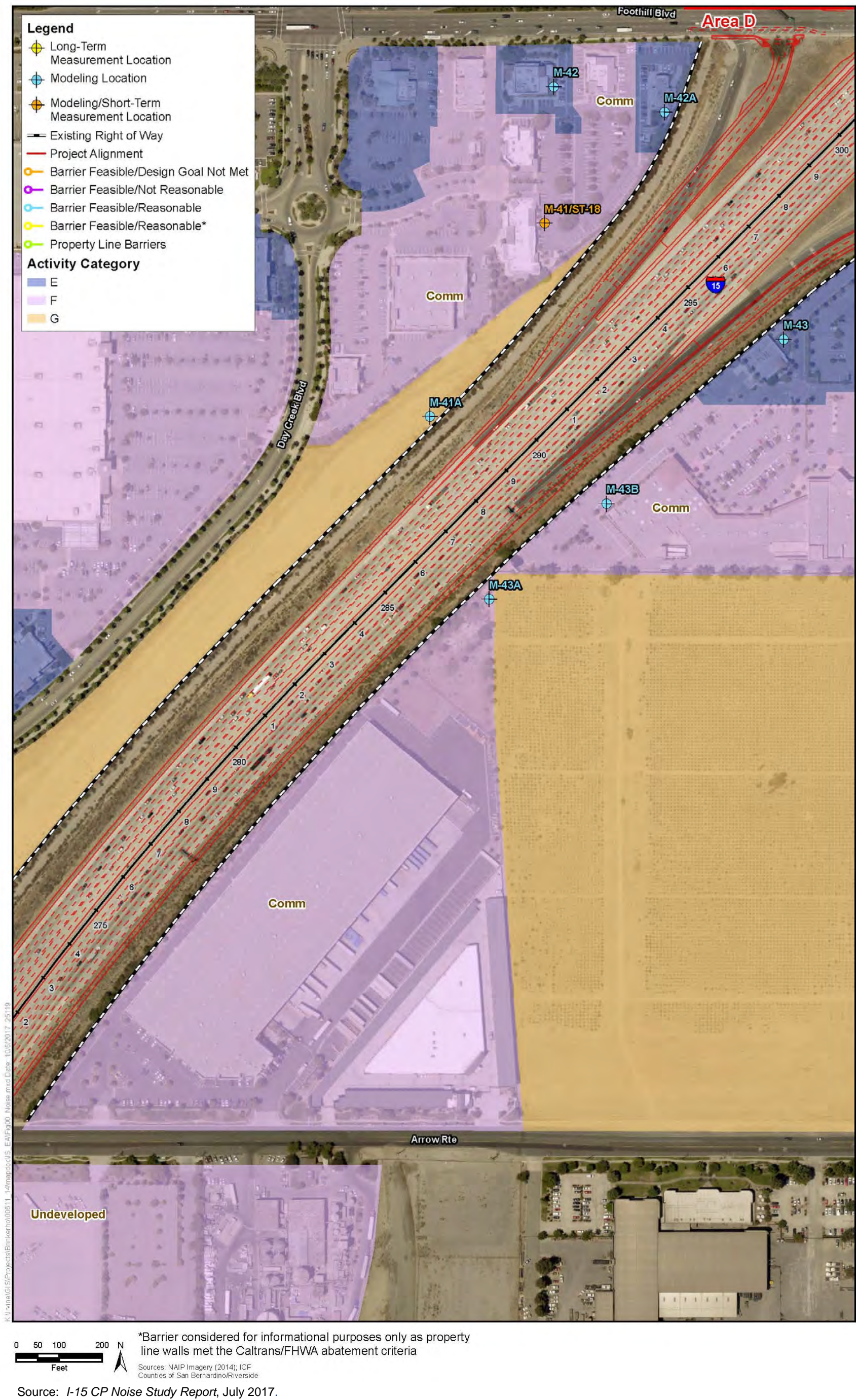
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 13



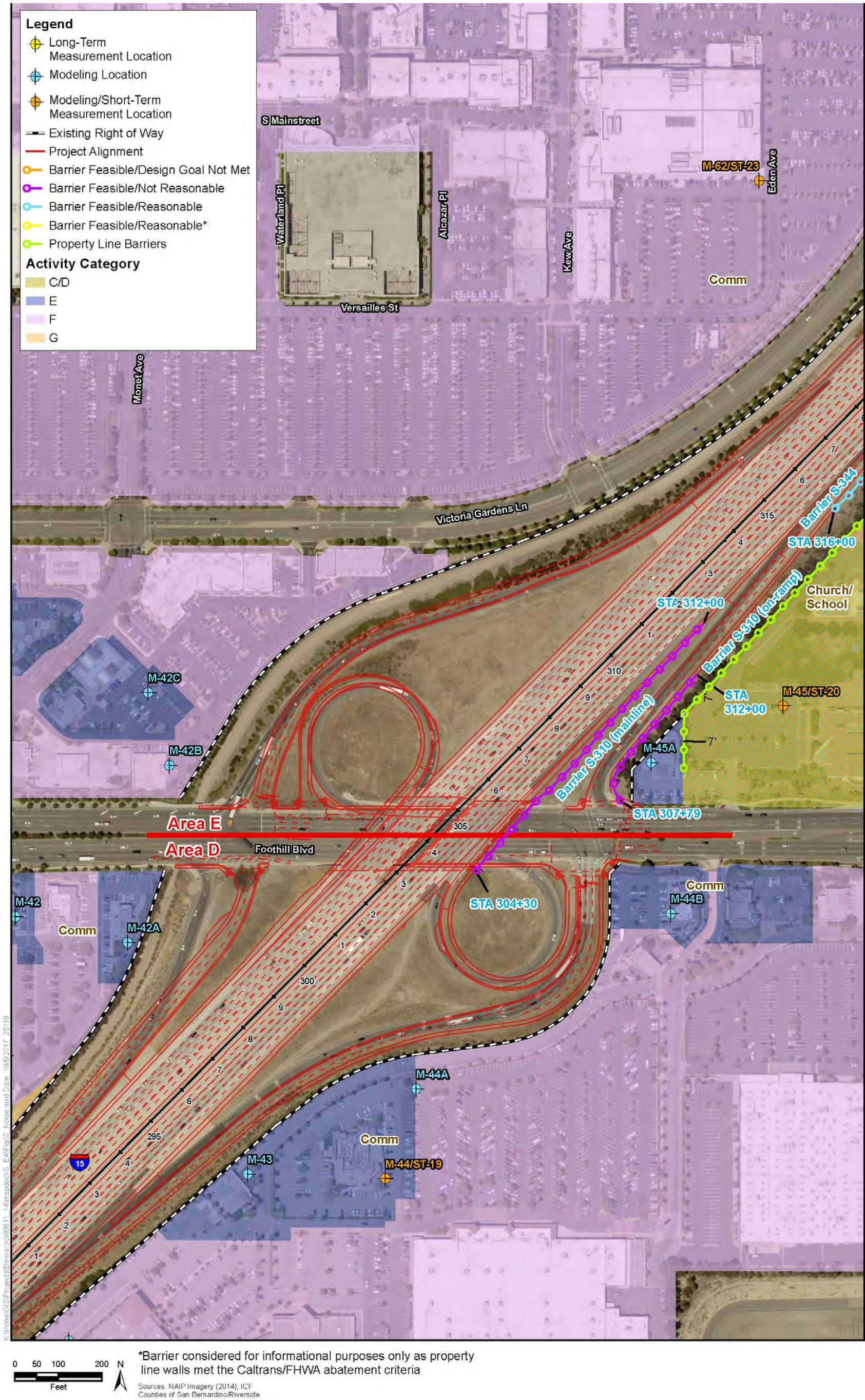
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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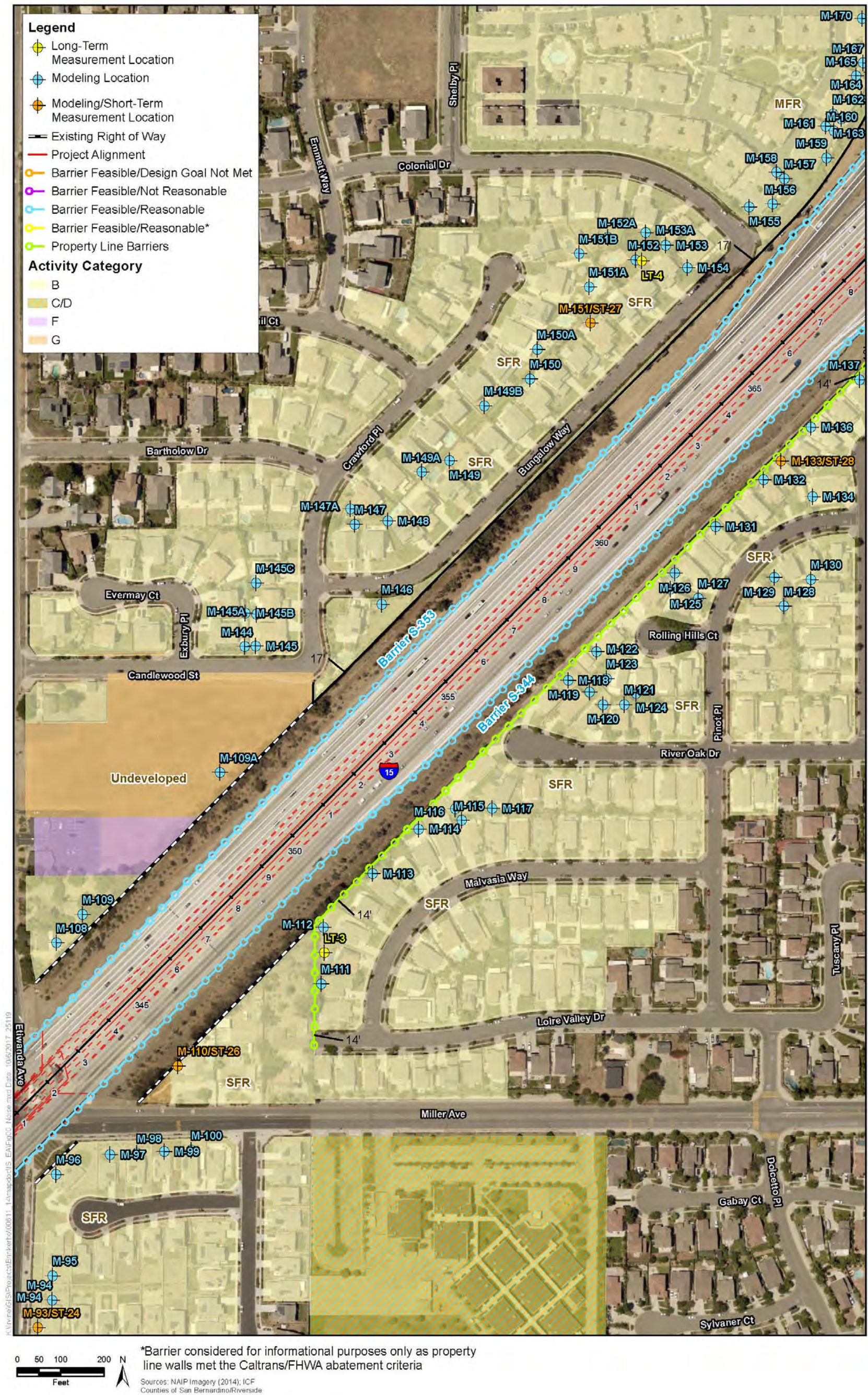
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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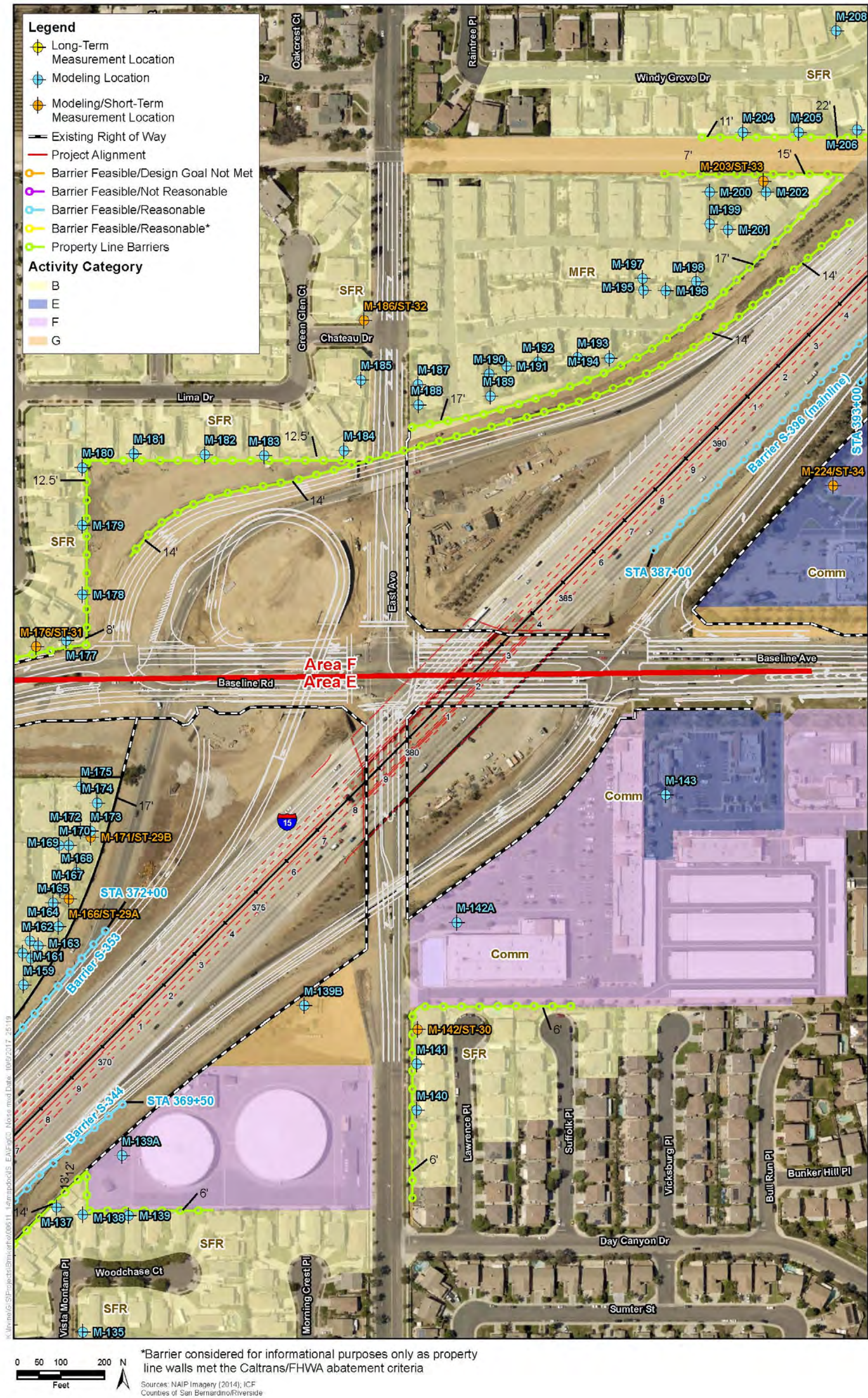
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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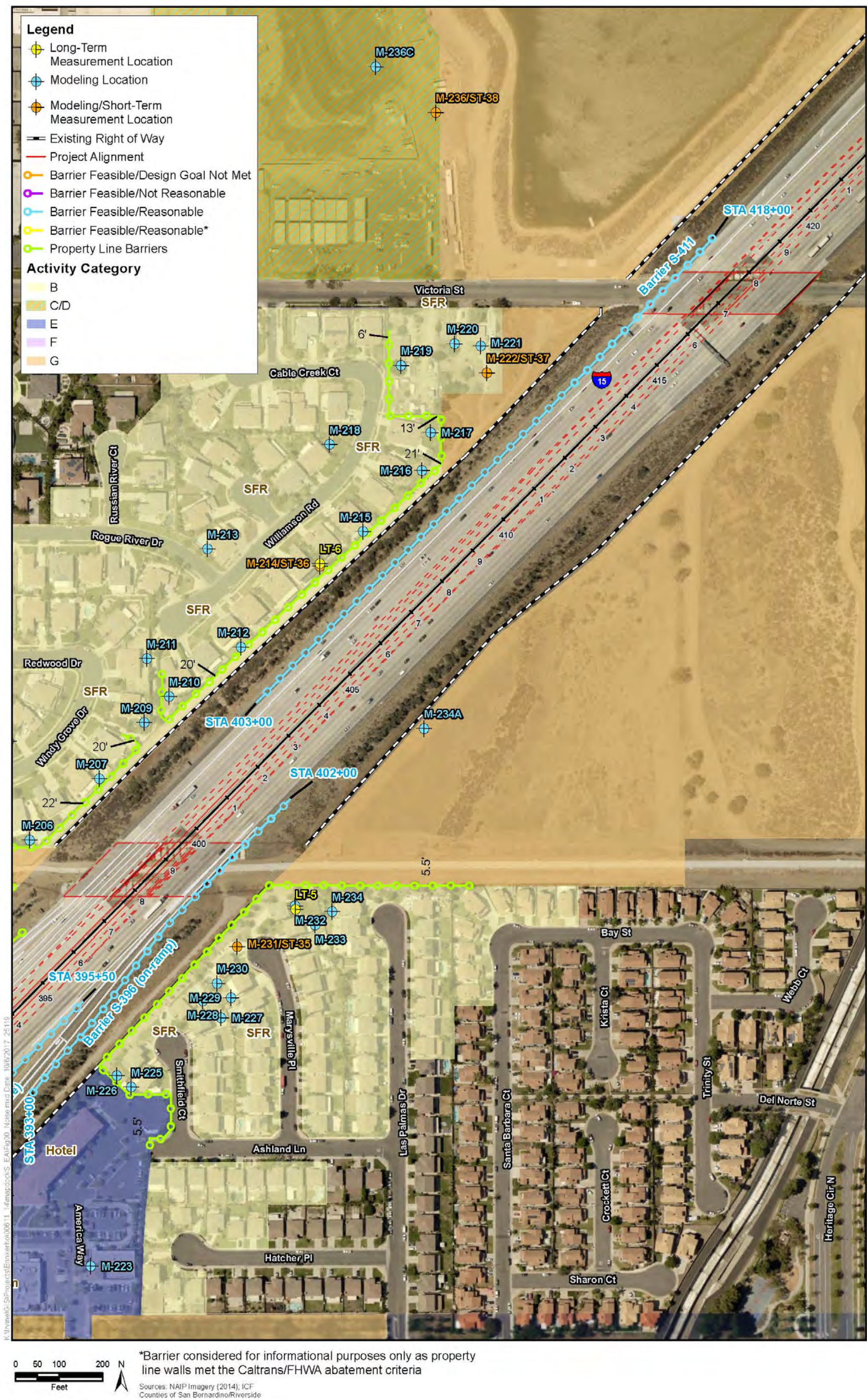
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Source: I-15 CP Noise Study Report, July 2017.

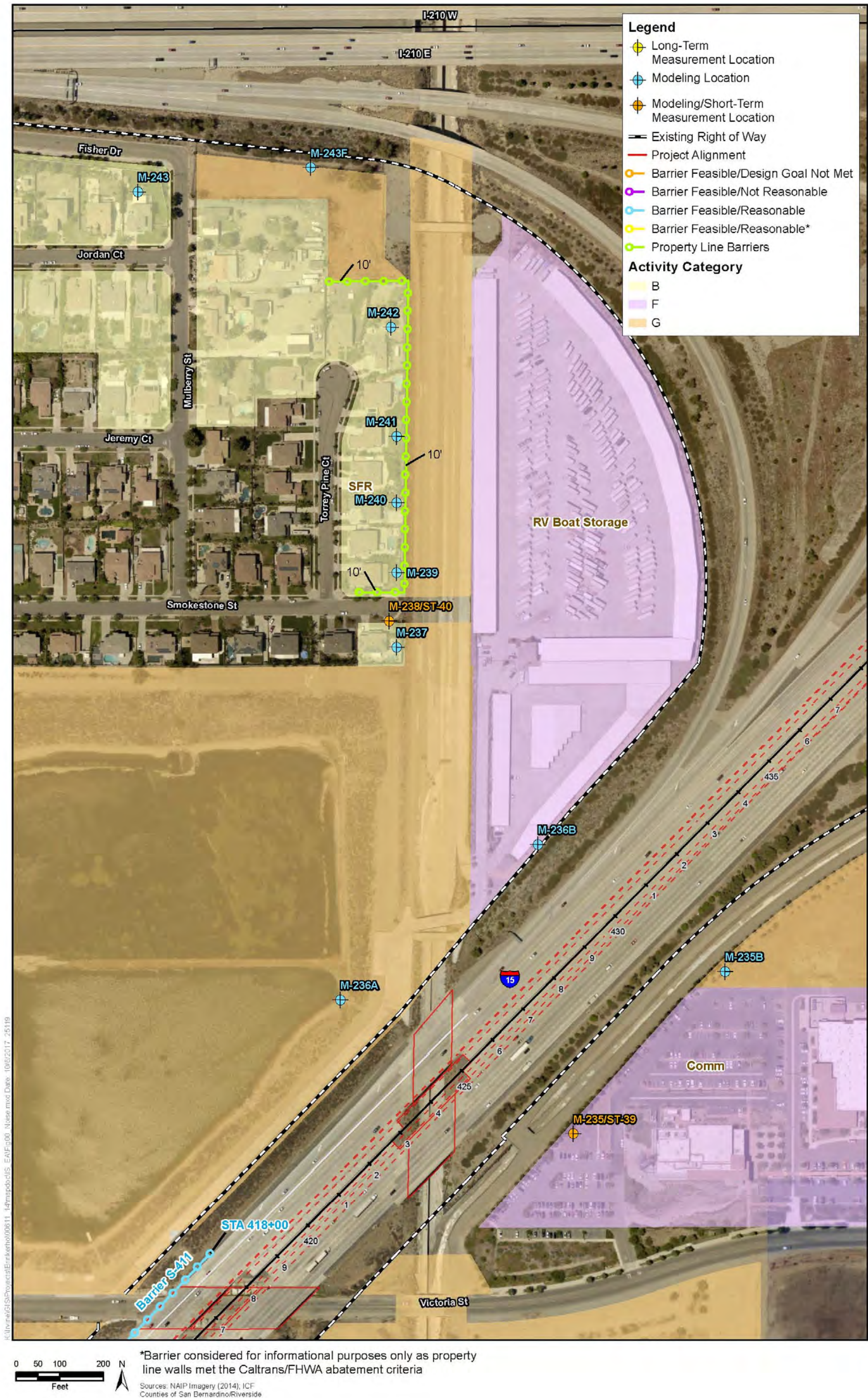
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 19



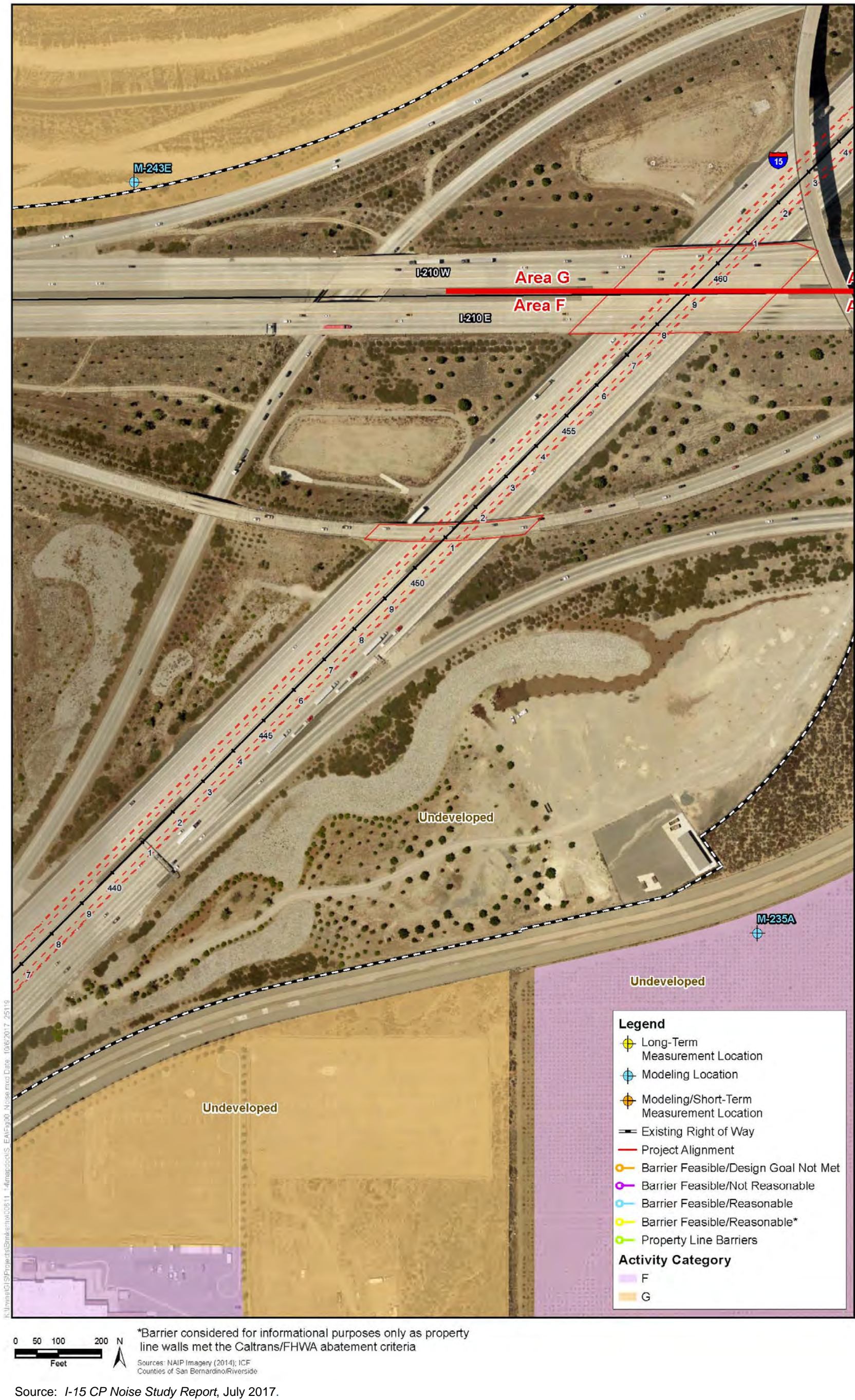
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 20



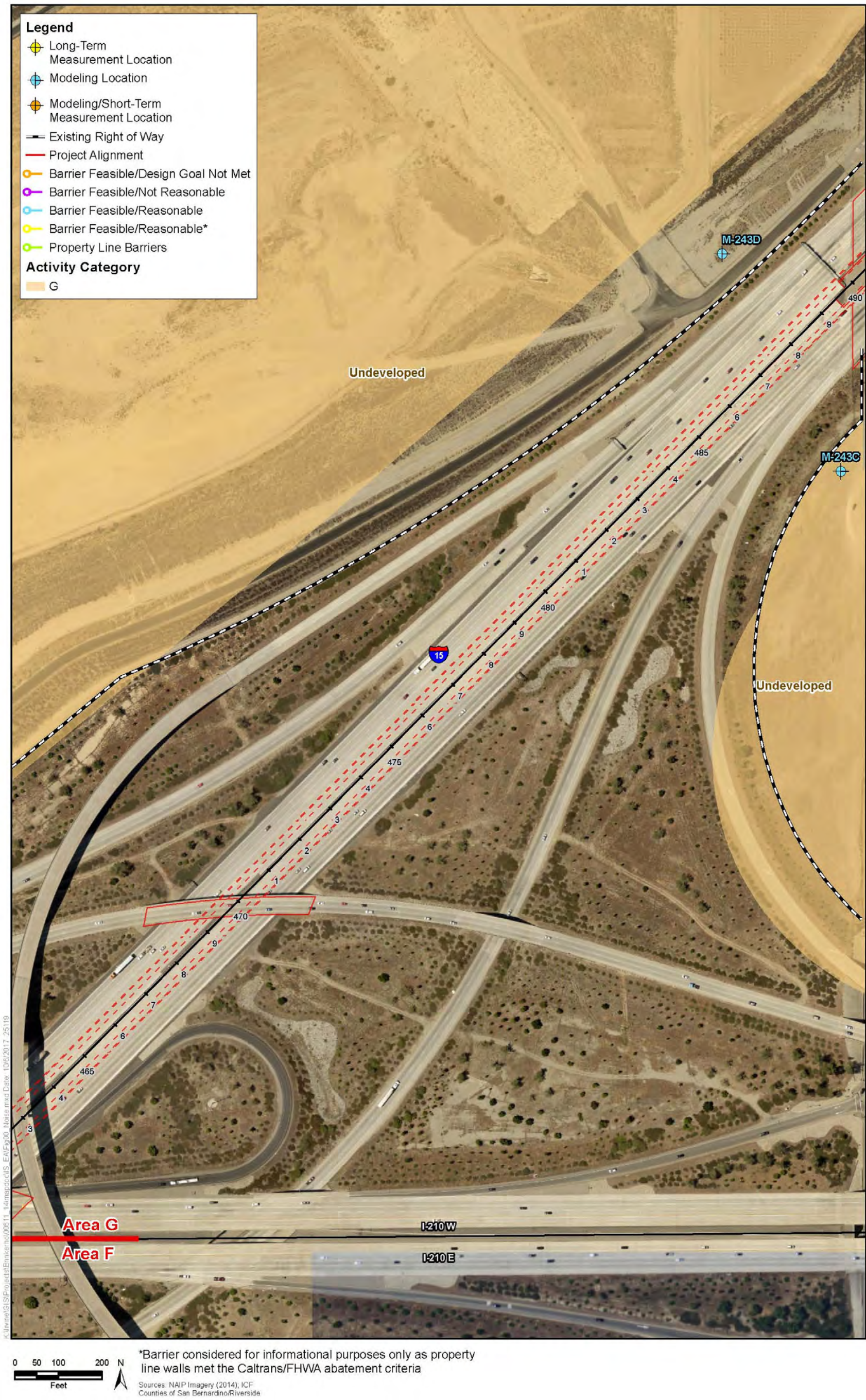
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 21



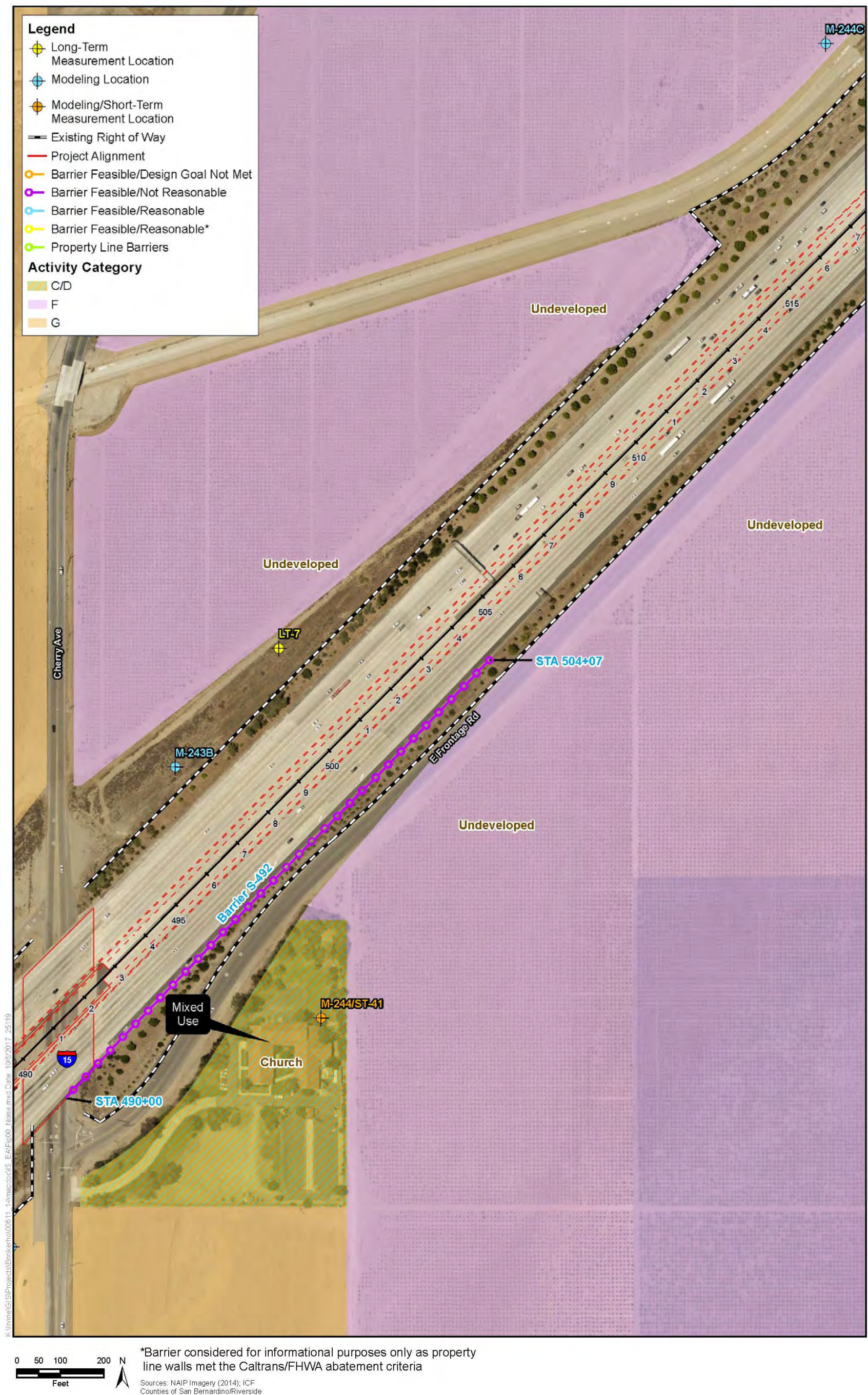
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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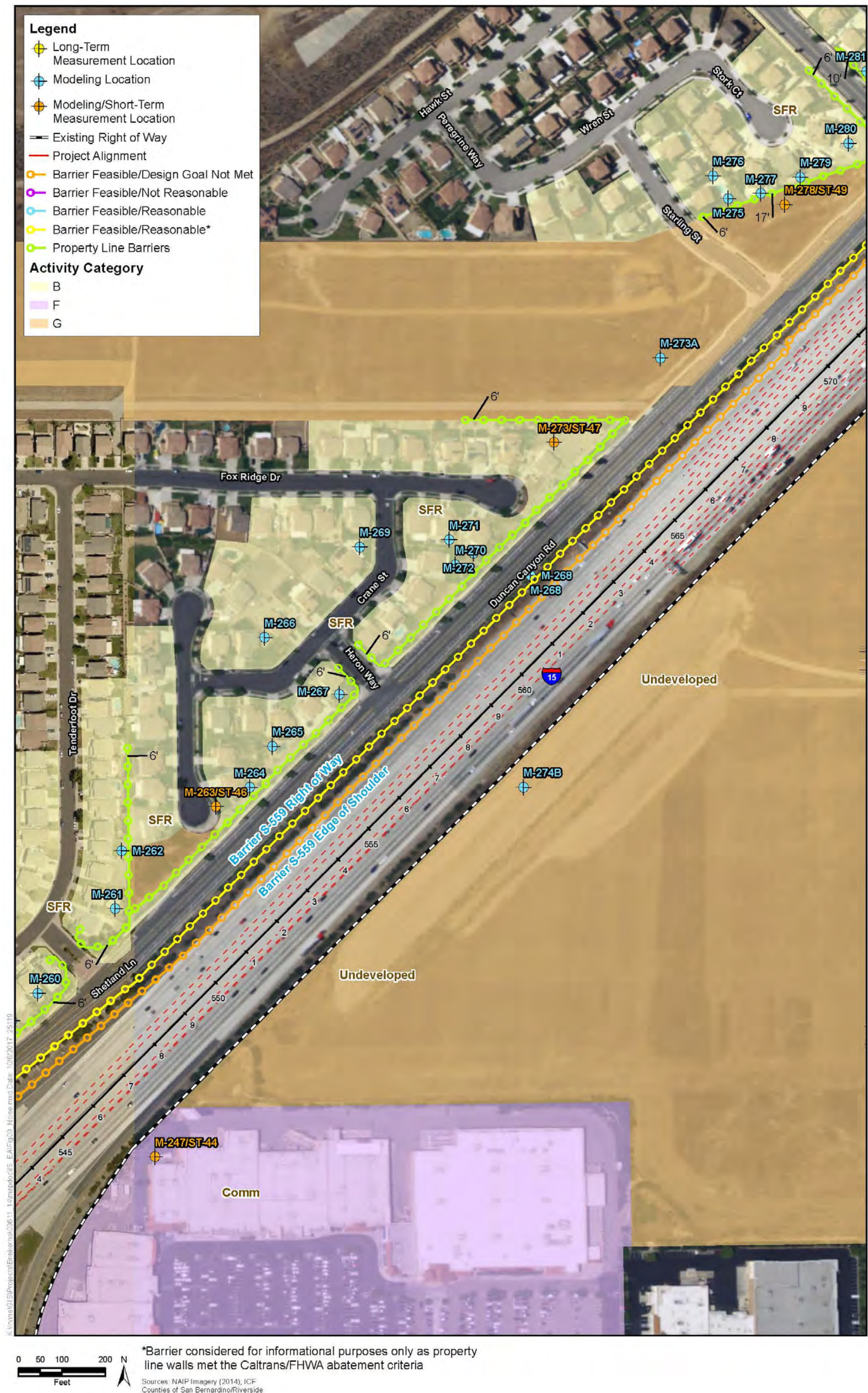
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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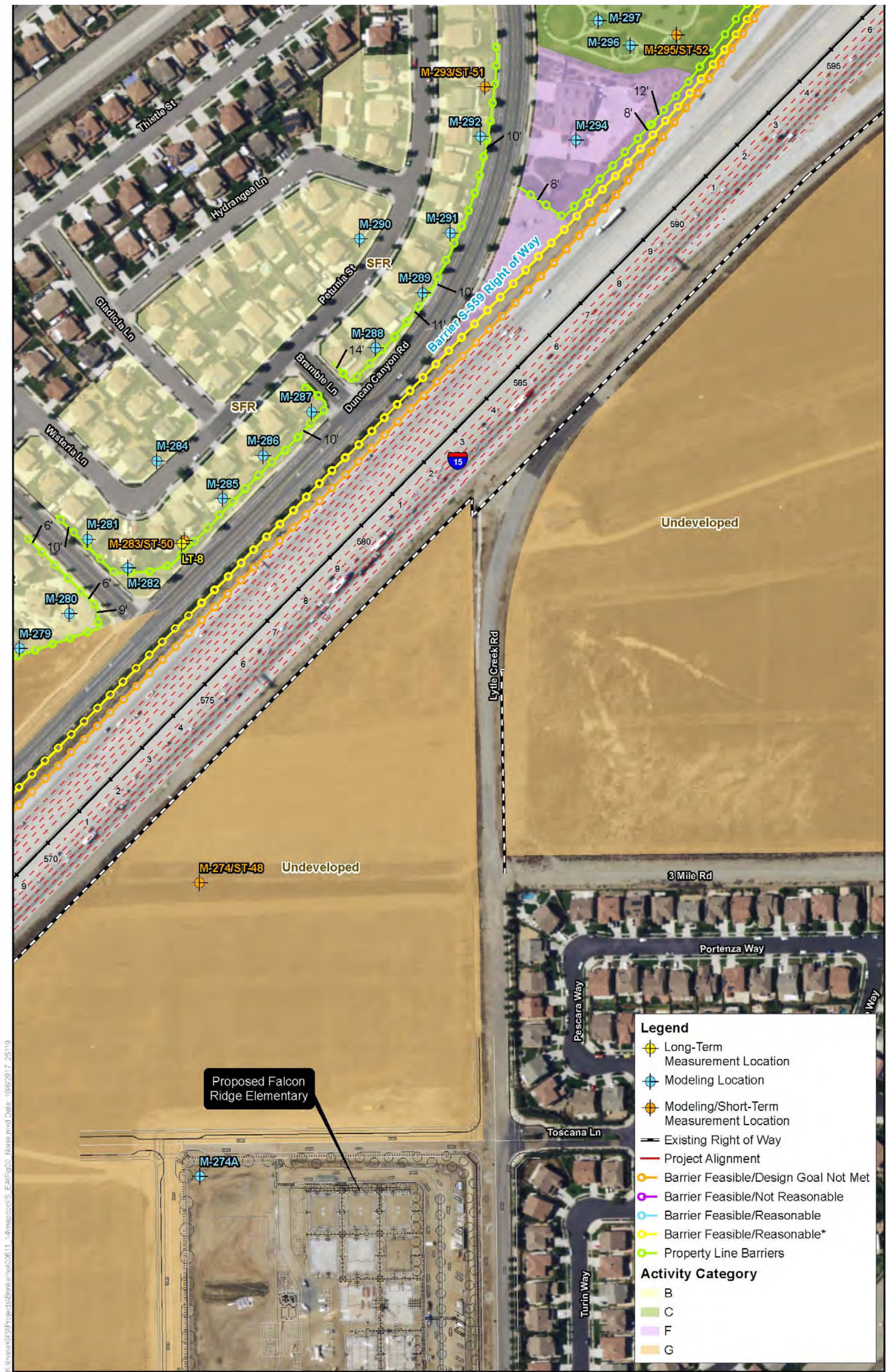
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 26



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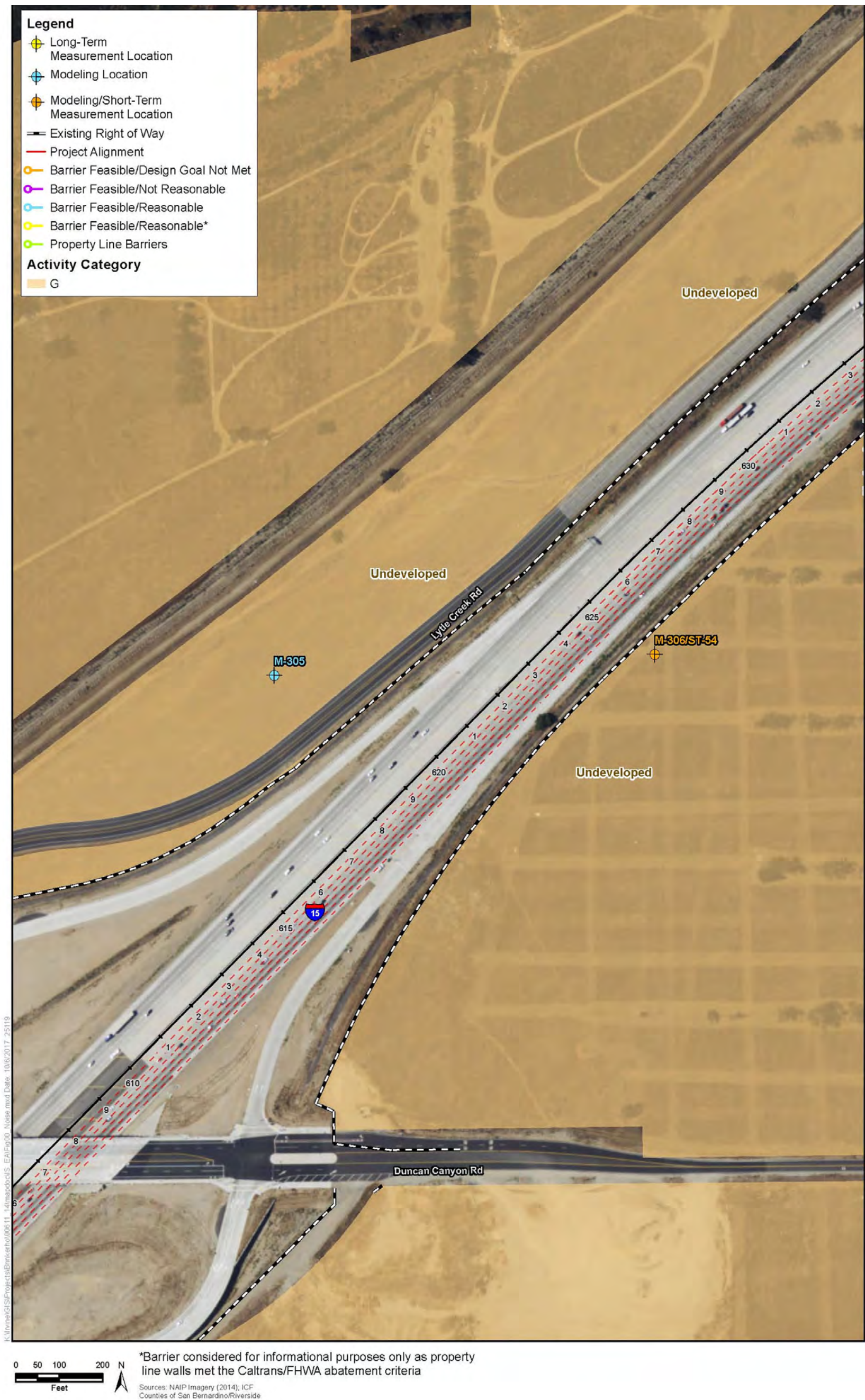
Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 27



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Figure 2-41. I-15 Corridor Project - Evaluated Noise Barriers
Sheet 28



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Long-term monitoring was conducted at eight locations (LT-1 through LT-8) along the project alignment. The long-term measurement locations, peak hour noise levels and times, and quietest hour noise levels and times at each measurement location are shown in **Table 2-70** below.

Table 2-70. Long-Term Noise Measurement Data Summary

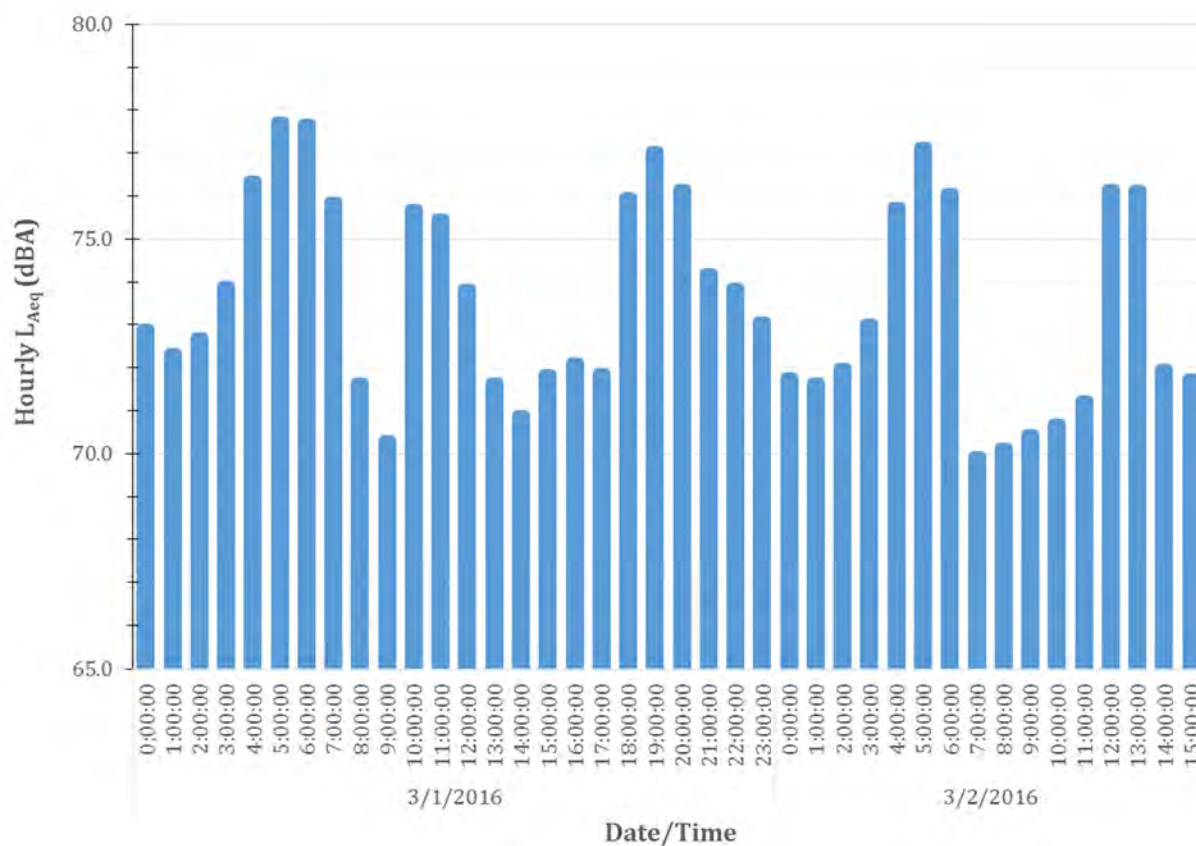
Site ID	Area	Measurement Location	Date	Peak Noise Hour Leq (dBA)	Quietest Hour Leq (dBA)
LT-1	B	1945 Burgundy Place, Ontario, CA	3/1/2016– 3/2/2016	77.7 (5:00–7:00)	69.9 (7:00–8:00)
LT-2	D	Undeveloped parcel north of 5050 East Fourth Street, Ontario, CA	2/3/2016– 2/4/2016	71.4 (6:00–7:00)	60.4 (18:00–19:00)
LT-3	E	13020 Malvasia Way, Rancho Cucamonga, CA	2/3/2016– 2/4/2016	66.5 (6:00–7:00)	60.6 (1:00–2:00)
LT-4	E	7420 Bungalow Way, Rancho Cucamonga, CA	2/2/2016– 2/3/2016	63.8 (6:00–7:00)	54.3 (0:00–1:00)
LT-5	F	7131 Marysville Place, Fontana, CA	2/2/2016– 2/3/2016	60.6 (6:00–7:00)	54.9 (10:00–11:00)
LT-6	F	13551 Williamson Road, Rancho Cucamonga, CA	3/1/2016– 3/2/2016	65.5 (5:00–6:00)	57.3 (7:00–8:00)
LT-7	G	Undeveloped land north of 6101 Cherry Avenue, Fontana, CA	10/6/2015– 10/8/2015	73.0 (7:00–8:00)	65.6 (0:00–1:00)
LT-8	G	15371 Petunia Street, Fontana, CA	3/1/2016– 3/2/2016	67.7 (5:00–6:00)	61.1 (0:00–1:00)
Source: I-15 CP Noise Study Report, July 2017.					

The long-term noise measurement sites were selected to document the diurnal traffic noise pattern, which was dominated by traffic noise on I-15. The purpose of the long-term noise measurements was to determine the changes in noise levels within the project area throughout a typical day. Using the peak hour identified by the long-term noise measurements helped to identify the peak hour traffic volume (AM peak hour or PM peak hour dependent on the peak hour identified in the long-term measurement) from the approved Traffic Operations Analysis Report (TOAR) to be analyzed in TNM modeling. The long-term sound level data were collected over 24-hour periods at various times between Tuesday, October 6, 2015 and Wednesday, March 2, 2016. Long-term noise measurements were only conducted on Tuesday through Thursday as directed by Caltrans' TeNS. The results of the long-term monitoring are summarized in **Table 2-71** through **Table 2-78** and **Figure 2-42** through **Figure 2-49**.

Table 2-71. Long-Term Monitoring at Site LT-1

Date	Beginning Hour	Hourly dBA (L_{eq}[h])	Difference from Loudest Hour (dBA)
March 1, 2016	0:00:00	72.9	-4.8
	1:00:00	72.3	-5.4
	2:00:00	72.7	-5.0
	3:00:00	73.9	-3.8
	4:00:00	76.3	-1.4
	5:00:00	77.7	0.0
	6:00:00	77.7	0.0
	7:00:00	75.9	-1.8
	8:00:00	71.6	-6.1
	9:00:00	70.3	-7.4
	10:00:00	75.7	-2.0
	11:00:00	75.5	-2.2
	12:00:00	73.8	-3.9
	13:00:00	71.7	-6.0
	14:00:00	70.9	-6.8
	15:00:00	71.8	-5.9
	16:00:00	72.1	-5.6
	17:00:00	71.9	-5.8
	18:00:00	76.0	-1.7
	19:00:00	77.0	-0.7
	20:00:00	76.2	-1.5
	21:00:00	74.2	-3.5
	22:00:00	73.9	-3.8
	23:00:00	73.1	-4.6
March 2, 2016	0:00:00	71.8	-5.9
	1:00:00	71.7	-6.0
	2:00:00	72.0	-5.7
	3:00:00	73.0	-4.7
	4:00:00	75.8	-1.9
	5:00:00	77.1	-0.6
	6:00:00	76.1	-1.6
	7:00:00	69.9	-7.8
	8:00:00	70.1	-7.6
	9:00:00	70.4	-7.3
	10:00:00	70.7	-7.0
	11:00:00	71.2	-6.5
	12:00:00	76.2	-1.5
	13:00:00	76.1	-1.6
	14:00:00	72.0	-5.7
	15:00:00	71.8	-5.9
Maximum 77.7			
Minimum 69.9			
Note: Worst noise hour is bolded. Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-42. Long-Term Monitoring at Site LT-1

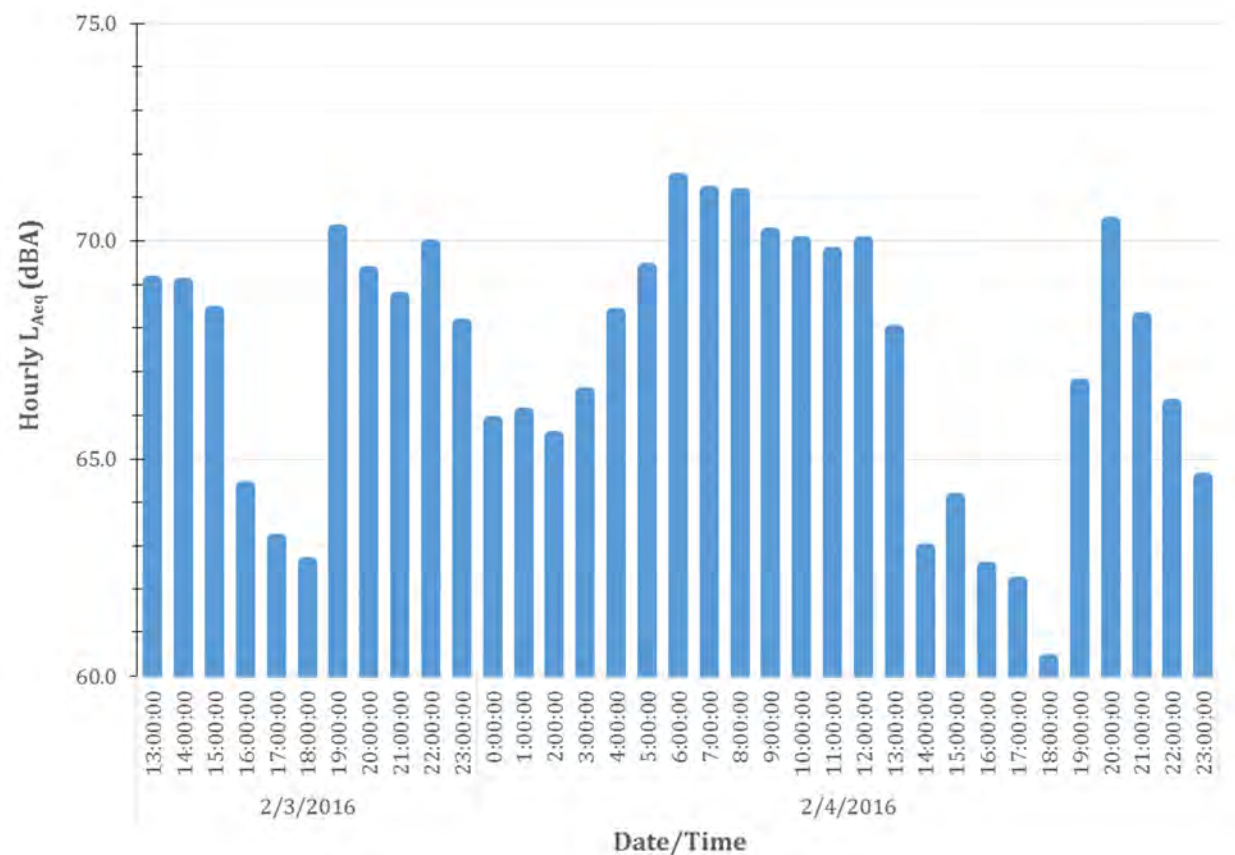


Source: I-15 CP Noise Study Report, July 2017.

Table 2-72. Long-Term Monitoring at Site LT-2

Date	Beginning Hour	Hourly dBA (L_{eq}[h])	Difference from Loudest Hour (dBA)
February 3, 2016	13:00:00	69.1	-2.3
	14:00:00	69.0	-2.4
	15:00:00	68.4	-3.0
	16:00:00	64.4	-7.0
	17:00:00	63.2	-8.2
	18:00:00	62.6	-8.8
	19:00:00	70.3	-1.1
	20:00:00	69.3	-2.1
	21:00:00	68.7	-2.7
	22:00:00	69.9	-1.5
	23:00:00	68.1	-3.3
February 4, 2016	0:00:00	65.9	-5.5
	1:00:00	66.0	-5.4
	2:00:00	65.5	-5.9
	3:00:00	66.5	-4.9
	4:00:00	68.3	-3.1
	5:00:00	69.4	-2.0
	6:00:00	71.4	0.0
	7:00:00	71.1	-0.3
	8:00:00	71.1	-0.3
	9:00:00	70.2	-1.2
	10:00:00	70.0	-1.4
	11:00:00	69.7	-1.7
	12:00:00	70.0	-1.4
	13:00:00	67.9	-3.5
	14:00:00	62.9	-8.5
	15:00:00	64.1	-7.3
	16:00:00	62.5	-8.9
	17:00:00	62.2	-9.2
	18:00:00	60.4	-11.0
	19:00:00	66.7	-4.7
	20:00:00	70.4	-1.0
	21:00:00	68.3	-3.1
	22:00:00	66.2	-5.2
	23:00:00	64.6	-6.8
Maximum 71.4			
Minimum 60.4			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-43. Long-Term Monitoring at Site LT-2

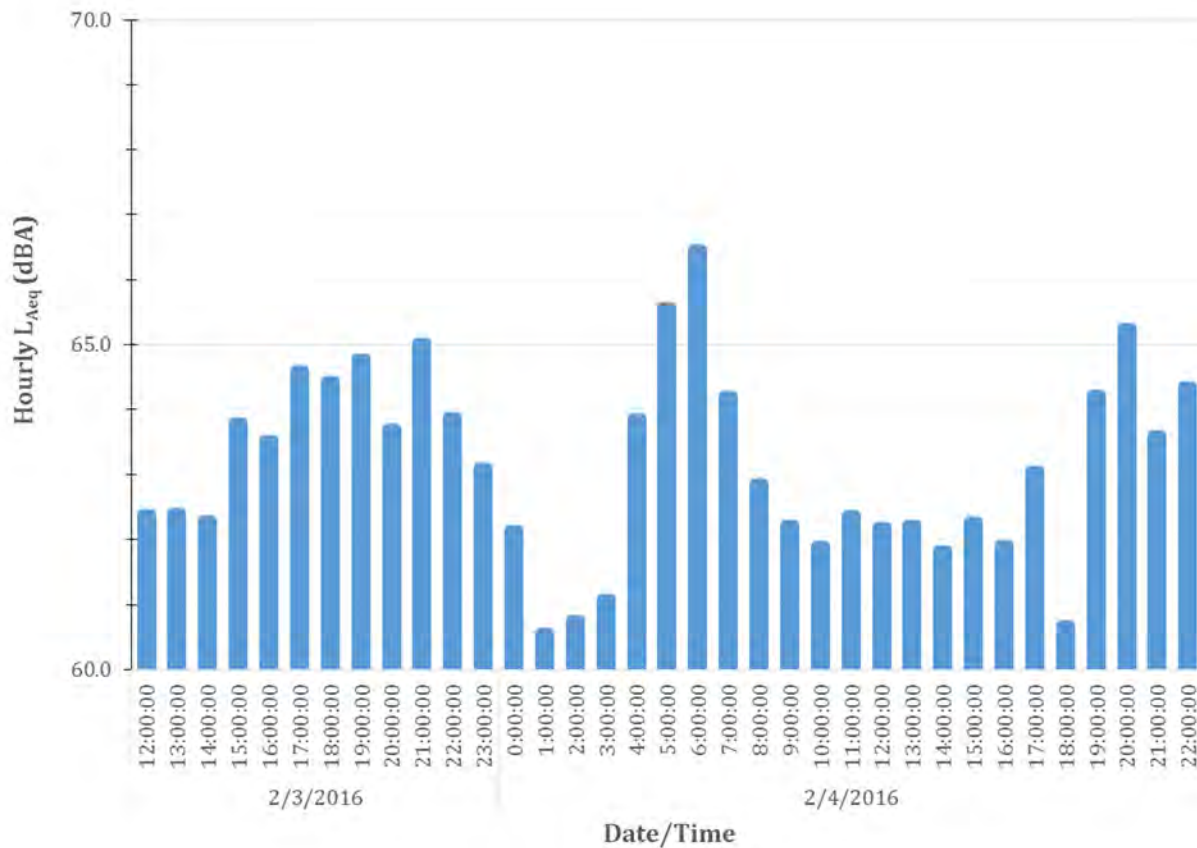


Source: I-15 CP Noise Study Report, July 2017.

Table 2-73. Long-Term Monitoring at Site LT-3

Date	Beginning Hour	Hourly dBA (L_{eq}[h])	Difference from Loudest Hour (dBA)
February 3, 2016	12:00:00	62.4	-4.1
	13:00:00	62.4	-4.1
	14:00:00	62.3	-4.2
	15:00:00	63.8	-2.7
	16:00:00	63.5	-3.0
	17:00:00	64.6	-1.9
	18:00:00	64.4	-2.1
	19:00:00	64.8	-1.7
	20:00:00	63.7	-2.8
	21:00:00	65.0	-1.5
	22:00:00	63.9	-2.6
	23:00:00	63.1	-3.4
February 4, 2016	0:00:00	62.1	-4.4
	1:00:00	60.6	-5.9
	2:00:00	60.8	-5.7
	3:00:00	61.1	-5.4
	4:00:00	63.9	-2.6
	5:00:00	65.6	-0.9
	6:00:00	66.5	0.0
	7:00:00	64.2	-2.3
	8:00:00	62.9	-3.6
	9:00:00	62.2	-4.3
	10:00:00	61.9	-4.6
	11:00:00	62.4	-4.1
	12:00:00	62.2	-4.3
	13:00:00	62.2	-4.3
	14:00:00	61.8	-4.7
	15:00:00	62.3	-4.2
	16:00:00	61.9	-4.6
	17:00:00	63.1	-3.4
	18:00:00	60.7	-5.8
	19:00:00	64.2	-2.3
	20:00:00	65.3	-1.2
	21:00:00	63.6	-2.9
	22:00:00	64.4	-2.1
	23:00:00	63.7	-2.8
Maximum 66.5			
Minimum 60.6			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-44. Long-Term Monitoring at Site LT-3

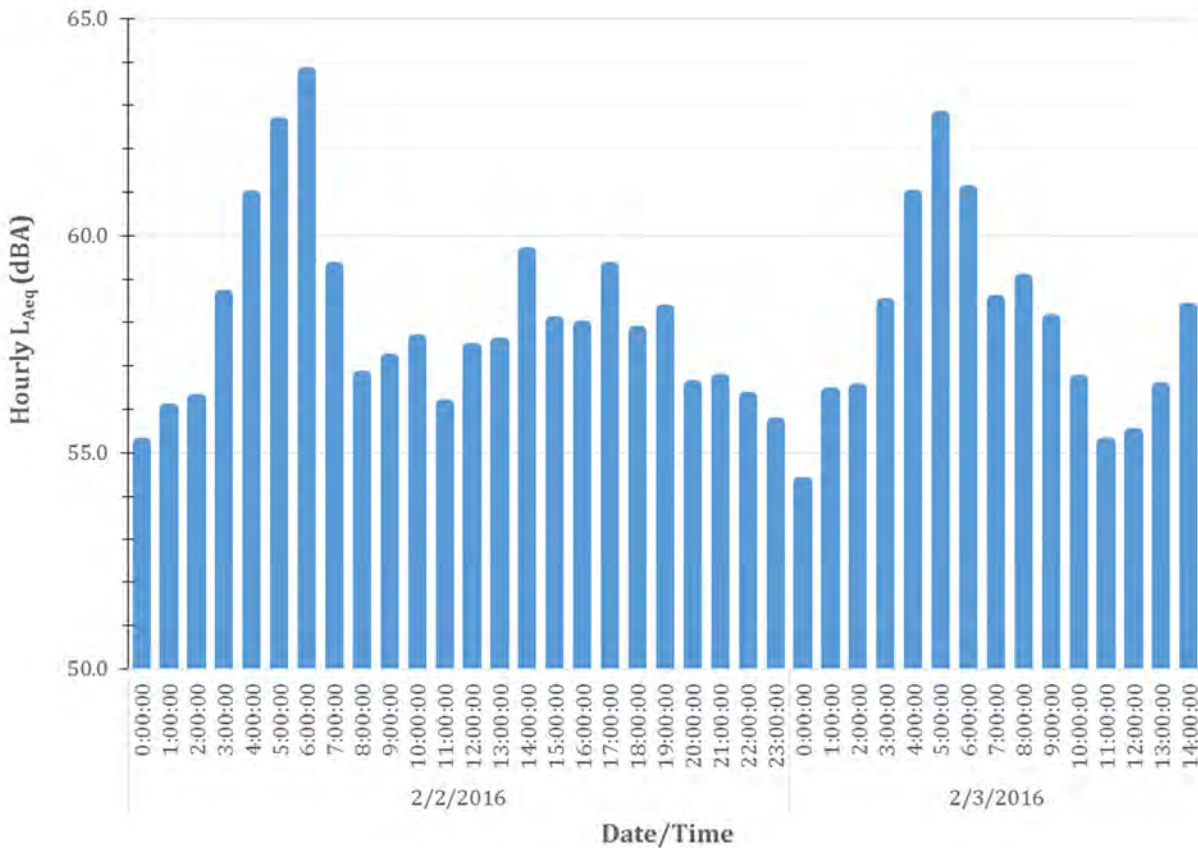


Source: I-15 CP Noise Study Report, July 2017.

Table 2-74. Long-Term Monitoring at Site LT-4

Date	Beginning Hour	Hourly dBA (L_{eq}[h])	Difference from Loudest Hour (dBA)
February 2, 2016	0:00:00	55.2	-8.6
	1:00:00	56.0	-7.8
	2:00:00	56.2	-7.6
	3:00:00	58.6	-5.2
	4:00:00	60.9	-2.9
	5:00:00	62.6	-1.2
	6:00:00	63.8	0.0
	7:00:00	59.3	-4.5
	8:00:00	56.8	-7.0
	9:00:00	57.2	-6.6
	10:00:00	57.6	-6.2
	11:00:00	56.1	-7.7
	12:00:00	57.4	-6.4
	13:00:00	57.5	-6.3
	14:00:00	59.6	-4.2
	15:00:00	58.0	-5.8
	16:00:00	57.9	-5.9
	17:00:00	59.3	-4.5
	18:00:00	57.8	-6.0
	19:00:00	58.3	-5.5
	20:00:00	56.6	-7.2
	21:00:00	56.7	-7.1
	22:00:00	56.3	-7.5
	23:00:00	55.7	-8.1
February 3, 2016	0:00:00	54.3	-9.5
	1:00:00	56.4	-7.4
	2:00:00	56.5	-7.3
	3:00:00	58.4	-5.4
	4:00:00	60.9	-2.9
	5:00:00	62.7	-1.1
	6:00:00	61.0	-2.8
	7:00:00	58.5	-5.3
	8:00:00	59.0	-4.8
	9:00:00	58.1	-5.7
	10:00:00	56.7	-7.1
	11:00:00	55.2	-8.6
	12:00:00	55.5	-8.3
	13:00:00	56.5	-7.3
	14:00:00	58.3	-5.5
Maximum 63.8			
Minimum 54.3			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-45. Long-Term Monitoring at Site LT-4

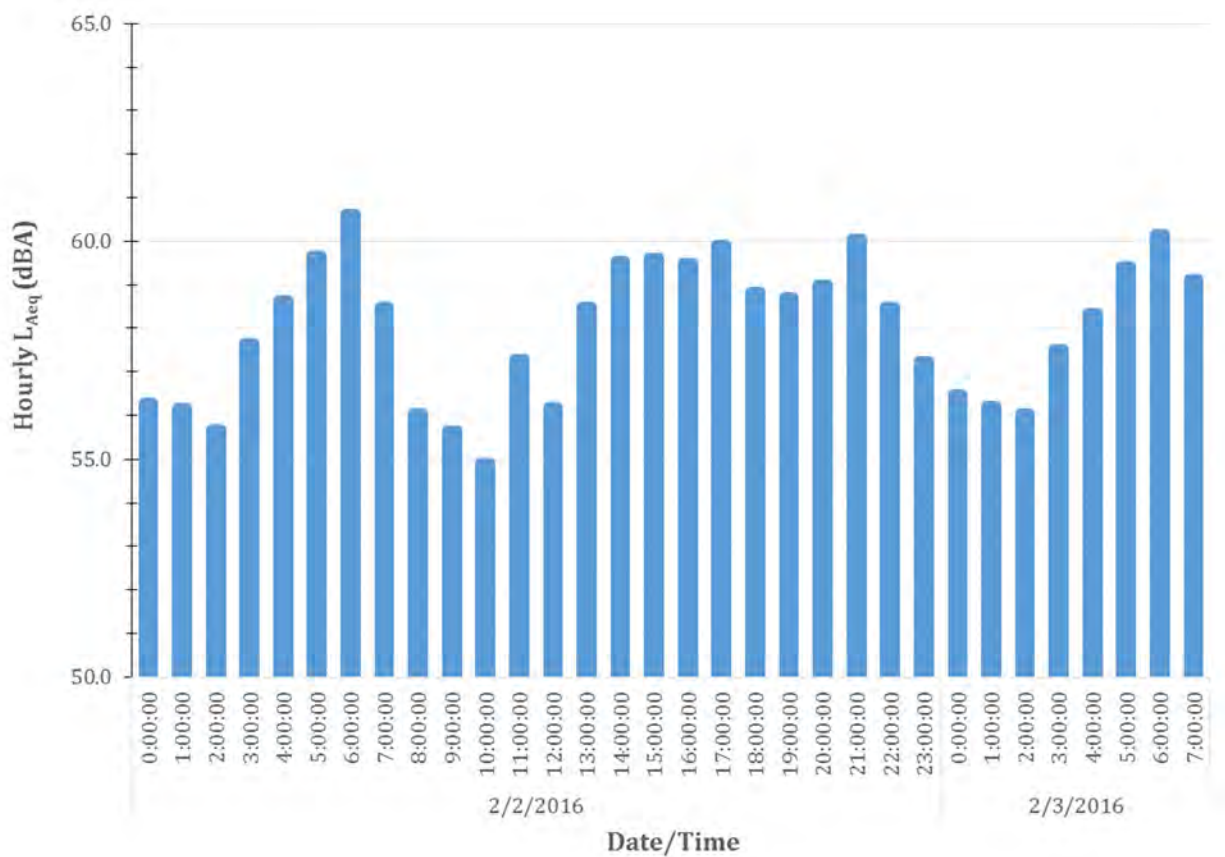


Source: I-15 CP Noise Study Report, July 2017.

Table 2-75. Long-Term Monitoring at Site LT-5

Date	Beginning Hour	Hourly dBA (L _{eq} [h])	Difference from Loudest Hour (dBA)
February 2, 2016	0:00:00	56.3	-4.3
	1:00:00	56.2	-4.4
	2:00:00	55.7	-4.9
	3:00:00	57.7	-2.9
	4:00:00	58.6	-2.0
	5:00:00	59.7	-0.9
	6:00:00	60.6	0.0
	7:00:00	58.5	-2.1
	8:00:00	56.0	-4.6
	9:00:00	55.6	-5.0
	10:00:00	54.9	-5.7
	11:00:00	57.3	-3.3
	12:00:00	56.2	-4.4
	13:00:00	58.5	-2.1
	14:00:00	59.5	-1.1
	15:00:00	59.6	-1.0
	16:00:00	59.5	-1.1
	17:00:00	59.9	-0.7
	18:00:00	58.8	-1.8
	19:00:00	58.7	-1.9
	20:00:00	59.0	-1.6
	21:00:00	60.1	-0.5
	22:00:00	58.5	-2.1
	23:00:00	57.2	-3.4
February 3, 2016	0:00:00	56.5	-4.1
	1:00:00	56.2	-4.4
	2:00:00	56.0	-4.6
	3:00:00	57.5	-3.1
	4:00:00	58.3	-2.3
	5:00:00	59.4	-1.2
	6:00:00	60.1	-0.5
	7:00:00	59.1	-1.5
Maximum 60.6			
Minimum 54.9			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-46. Long-Term Monitoring at Site LT-5

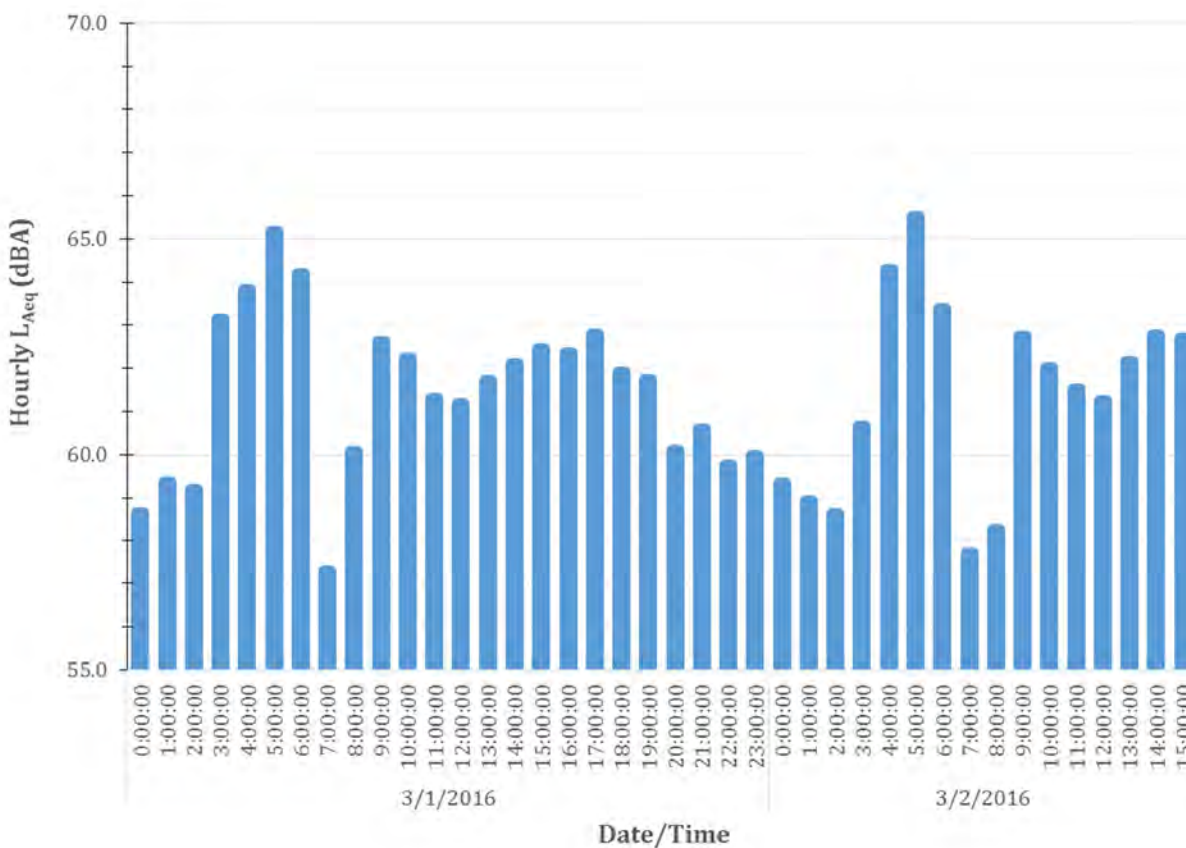


Source: I-15 CP Noise Study Report, July 2017.

Table 2-76. Long-Term Monitoring at Site LT-6

Date	Beginning Hour	Hourly dBA (L _{eq} [h])	Difference from Loudest Hour (dBA)
March 1, 2016	0:00:00	58.7	-6.8
	1:00:00	59.4	-6.1
	2:00:00	59.2	-6.3
	3:00:00	63.1	-2.4
	4:00:00	63.8	-1.7
	5:00:00	65.2	-0.3
	6:00:00	64.2	-1.3
	7:00:00	57.3	-8.2
	8:00:00	60.1	-5.4
	9:00:00	62.6	-2.9
	10:00:00	62.2	-3.3
	11:00:00	61.3	-4.2
	12:00:00	61.2	-4.3
	13:00:00	61.7	-3.8
	14:00:00	62.1	-3.4
	15:00:00	62.5	-3.0
	16:00:00	62.4	-3.1
	17:00:00	62.8	-2.7
	18:00:00	61.9	-3.6
	19:00:00	61.8	-3.7
	20:00:00	60.1	-5.4
	21:00:00	60.6	-4.9
	22:00:00	59.8	-5.7
	23:00:00	60.0	-5.5
March 2, 2016	0:00:00	59.4	-6.1
	1:00:00	58.9	-6.6
	2:00:00	58.6	-6.9
	3:00:00	60.7	-4.8
	4:00:00	64.3	-1.2
	5:00:00	65.5	0.0
	6:00:00	63.4	-2.1
	7:00:00	57.7	-7.8
	8:00:00	58.3	-7.2
	9:00:00	62.7	-2.8
	10:00:00	62.0	-3.5
	11:00:00	61.5	-4.0
	12:00:00	61.2	-4.3
	13:00:00	62.2	-3.3
	14:00:00	62.8	-2.7
	15:00:00	62.7	-2.8
Maximum 65.5			
Minimum 57.3			
Note: Worst noise hour is bolded. Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-47. Long-Term Monitoring at Site LT-6



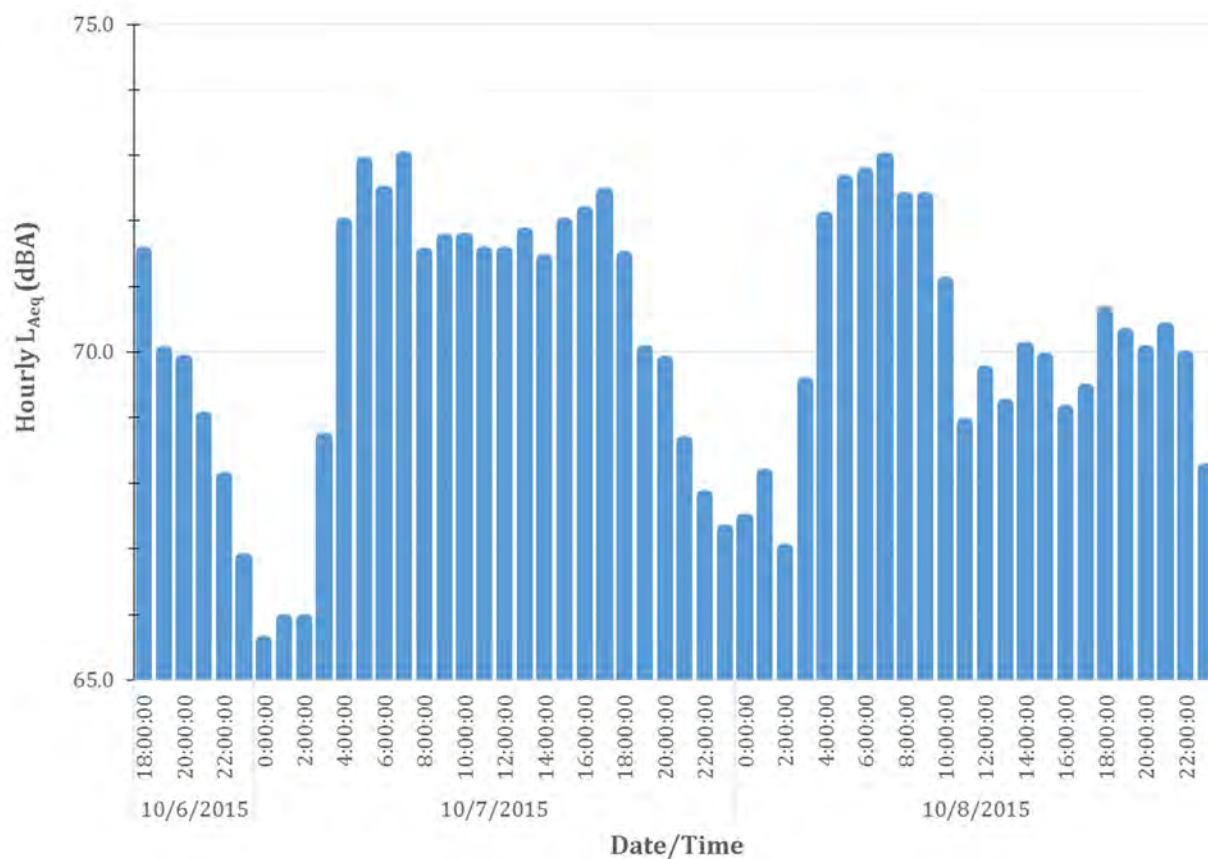
Source: I-15 CP Noise Study Report, July 2017.

Table 2-77. Long-Term Monitoring at Site LT-7

Date	Beginning Hour	Hourly dBA (L_{eq}[h])	Difference from Loudest Hour (dBA)
October 6, 2015	18:00:00	71.5	-1.5
	19:00:00	70.0	-3.0
	20:00:00	69.9	-3.1
	21:00:00	69.0	-4.0
	22:00:00	68.1	-4.9
	23:00:00	66.9	-6.1
October 7, 2015	0:00:00	65.6	-7.4
	1:00:00	65.9	-7.1
	2:00:00	65.9	-7.1
	3:00:00	68.7	-4.3
	4:00:00	72.0	-1.0
	5:00:00	72.9	-0.1
	6:00:00	72.5	-0.5
	7:00:00	73.0	0.0
	8:00:00	71.5	-1.5
	9:00:00	71.7	-1.3
	10:00:00	71.7	-1.3
	11:00:00	71.5	-1.5
	12:00:00	71.5	-1.5
	13:00:00	71.8	-1.2
	14:00:00	71.4	-1.6
	15:00:00	72.0	-1.0
	16:00:00	72.2	-0.8
	17:00:00	72.4	-0.6
	18:00:00	71.5	-1.5
	19:00:00	70.0	-3.0
	20:00:00	69.9	-3.1
	21:00:00	68.6	-4.4
	22:00:00	67.8	-5.2
	23:00:00	67.3	-5.7
October 8, 2015	0:00:00	67.5	-5.5
	1:00:00	68.1	-4.9
	2:00:00	67.0	-6.0
	3:00:00	69.5	-3.5
	4:00:00	72.1	-0.9
	5:00:00	72.6	-0.4
	6:00:00	72.7	-0.3
	7:00:00	73.0	0.0
	8:00:00	72.4	-0.6
	9:00:00	72.4	-0.6
	10:00:00	71.1	-1.9
	11:00:00	68.9	-4.1
	12:00:00	69.7	-3.3
	13:00:00	69.2	-3.8
	14:00:00	70.1	-2.9
	15:00:00	69.9	-3.1
	16:00:00	69.1	-3.9
	17:00:00	69.4	-3.6
	18:00:00	70.6	-2.4

Table 2-77. Long-Term Monitoring at Site LT-7 (continued)

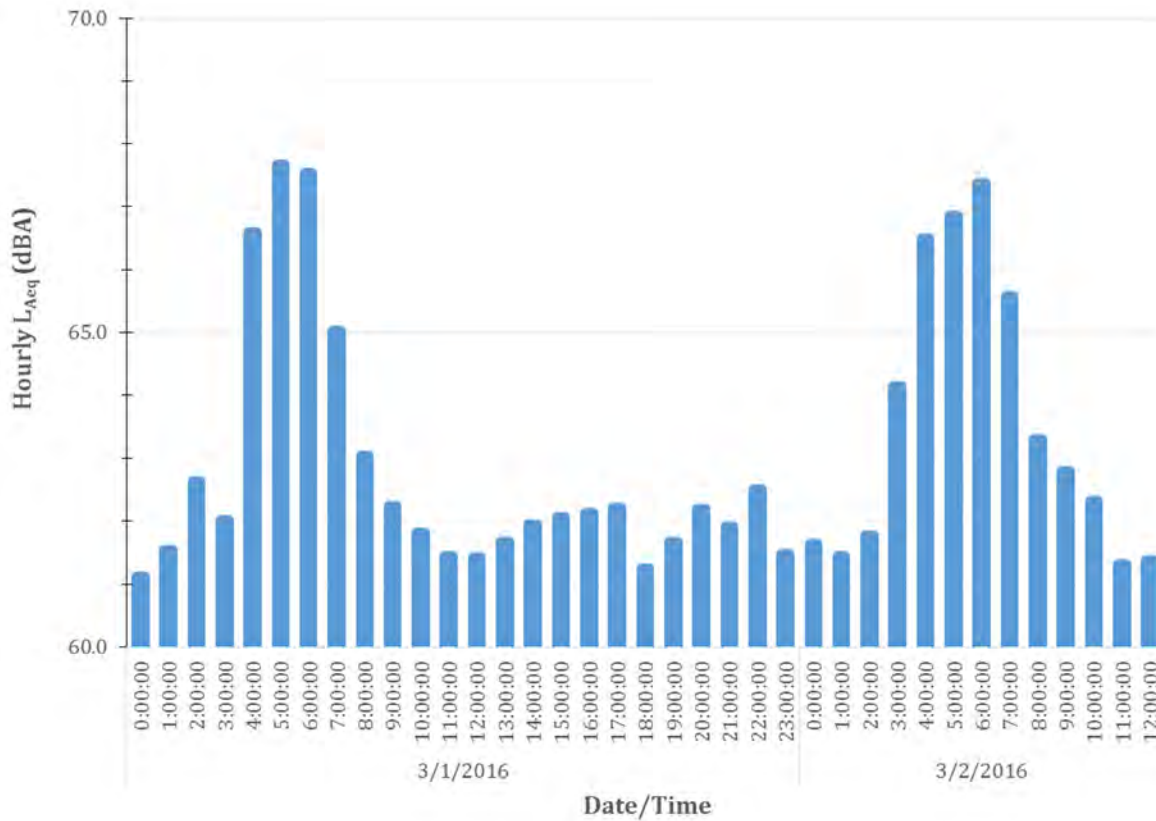
Date	Beginning Hour	Hourly dBA (L _{eq} [h])	Difference from Loudest Hour (dBA)
	19:00:00	70.3	-2.7
	20:00:00	70.0	-3.0
	21:00:00	70.4	-2.6
	22:00:00	69.9	-3.1
	23:00:00	68.2	-4.8
Maximum 73.0			
Minimum 65.6			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-48. Long-Term Monitoring at Site LT-7

Source: I-15 CP Noise Study Report, July 2017.

Table 2-78. Long-Term Monitoring at Site LT-8

Date	Beginning Hour	Hourly dBA (Leq[h])	Difference from Loudest Hour (dBA)
March 1, 2016	0:00:00	61.1	-6.6
	1:00:00	61.5	-6.2
	2:00:00	62.6	-5.1
	3:00:00	62.0	-5.7
	4:00:00	66.6	-1.1
	5:00:00	67.7	0.0
	6:00:00	67.5	-0.2
	7:00:00	65.0	-2.7
	8:00:00	63.0	-4.7
	9:00:00	62.2	-5.5
	10:00:00	61.8	-5.9
	11:00:00	61.4	-6.3
	12:00:00	61.4	-6.3
	13:00:00	61.7	-6.0
	14:00:00	61.9	-5.8
	15:00:00	62.1	-5.6
	16:00:00	62.1	-5.6
	17:00:00	62.2	-5.5
	18:00:00	61.3	-6.4
	19:00:00	61.7	-6.0
	20:00:00	62.2	-5.5
	21:00:00	61.9	-5.8
	22:00:00	62.5	-5.2
	23:00:00	61.5	-6.2
March 2, 2016	0:00:00	61.6	-6.1
	1:00:00	61.4	-6.3
	2:00:00	61.8	-5.9
	3:00:00	64.1	-3.6
	4:00:00	66.5	-1.2
	5:00:00	66.9	-0.8
	6:00:00	67.4	-0.3
	7:00:00	65.6	-2.1
	8:00:00	63.3	-4.4
	9:00:00	62.8	-4.9
	10:00:00	62.3	-5.4
	11:00:00	61.3	-6.4
	12:00:00	61.4	-6.3
Maximum 67.7			
Minimum 61.1			
Note: Worst noise hour is bolded.			
Source: I-15 CP Noise Study Report, July 2017.			

Figure 2-49. Long-Term Monitoring at Site LT-8

Source: I-15 CP Noise Study Report, July 2017.

Noise Model Calibration

TNM 2.5 was used to compare measured traffic noise levels with modeled noise levels at field measurement locations using the traffic count data collected at the time of the noise measurements. **Table 2-79** compares measured and modeled noise levels at each measurement location. Good agreement (within ± 2 dB) was achieved between the measured and modeled results at most model receivers.

For modeled locations that did not show good agreement (greater than ± 2 dB), model results were adjusted using K-factors for existing and future peak-noise-hour traffic noise results, as applicable. **Table 2-79** shows which adjustment factors were applied to each respective modeling receiver. If the absolute value of the K-factor was less than 2 dB, then the TNM 2.5 modeling result was not adjusted.

Existing Peak-Hour Noise Levels

Existing AM peak-hour traffic data obtained from the March 2017 *Traffic Study Report* were used in the calibrated TNM files for existing conditions to calculate the existing peak-hour noise levels. Modeled existing peak-hour traffic noise levels at all modeling receivers are provided in **Table 2-79** below.

Table 2-79. Comparison of Measured and Modeled Sound Levels in the TNM

Measurement Site	Area	Figure / Sheet	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dB)	K-Factor Used	K-Factor Applied to Additional Modeled Receiver(s)
M-2/ST-1	A	2-2 / 1	71.3	73.4	-2.1	-2.1	—
M-4/ST-2	A	2-2 / 3	71.5	71.5	0.0	0	—
M-7/ST-3	A	2-2 / 3	65.8	67.2	-1.4	0	—
M-10/ST-4	B	2-2 / 4	67.7	65.6	1.8	0	—
M-11/ST-5	B	2-2 / 5	71.8	71.3	0.5	0	—
M-12/ST-6	B	2-2 / 6	73.3	74.2	-0.9	0	—
M-13/ST-7	B	2-2 / 7	61.9	66.4	-4.5	-4.5	—
M-15/ST-8	B	2-2 / 7	63.1	66.0	-2.9	-2.9	M-14, M-16
M-19/ST-9	C	2-2 / 8	64.8	69.1	-4.3	-4.3	M-18
M-21/ST-10	C	2-2 / 8	68.4	71.6	-3.2	-3.2	M-20, M-25
M-24/ST-11	C	2-2 / 8 & 9	69.5	71.1	-1.5	0	—
M-28/ST-12	D	2-2 / 10	65.0	62.4	2.6	2.6	M-29
M-31/ST-13	D	2-2 / 10	64.3	65.5	-1.2	0	—
M-32/ST-14	D	2-2 / 10	66.6	67.1	-0.5	0	—
M-35/ST-15	D	2-2 / 11	56.0	61.0	-5.0	-5.0	—
M-37/ST-16	D	2-2 / 12	72.2	68.4	3.8	3.8	—
M-38/ST-17	D	2-2 / 12	64.1	64.3	-0.2	0	—
M-41/ST-18	D	2-2 / 14	67.6	68.5	-0.9	0	—
M-44/ST-19	D	2-2 / 15	57.4	57.2	0.2	0	—
M-45/ST-20	E	2-2 / 15	63.2	65.4	-2.2	-2.2	M-46
M-50/ST-21	E	2-2 / 16	53.8	55.5	-1.7	0	—
M-85/ST-22	E	2-2 / 16	55.6	57.6	-2.0	-2.0	M-86
M-62/ST-23	E	2-2 / 16	66.2	68.2	-2.0	-2.0	M-62A
M-93/ST-24	E	2-2 / 16	64.5	67.4	-2.9	-2.9	M-94, M-95
M-102/ST-25	E	2-2 / 16	66.3	67.0	-0.7	0	—
M-110/ST-26	E	2-2 / 17	62.5	64.6	-2.1	-2.1	—
M-151/ST-27	E	2-2 / 17	60.8	56.7	4.1	4.1	M-149, M-150
M-133/ST-28	E	2-2 / 17	61.6	60.6	1.0	0	—
M-166/ST-29A	E	2-2 / 18	57.3	57.2	0.1	0	—

Table 2-79. Comparison of Measured and Modeled Sound Levels in the TNM (continued)

Measurement Site	Area	Figure / Sheet	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dB)	K-Factor Used	K-Factor Applied to Additional Modeled Receiver(s)
M-171/ST-29B	E	2-2 / 18	59.9	59.8	0.1	0	—
M-142/ST-30	F	2-2 / 18	58.8	62.2	-3.4	0 ^a	—
M176/ST-31	F	2-2 / 18	59.2	59.4	-0.2	0	—
M-186/ST-32	F	2-2 / 18	62.1	64.6	-2.5	0 ^a	—
M-203/ST-33	F	2-2 / 18	61.1	63.1	-2.0	0 ^a	—
M-224/ST-34	F	2-2 / 18	62.3	64.6	-2.0	0 ^a	—
M-231/ST-35	F	2-2 / 19	58.5	58.7	0.2	0	—
M-214/ST-36	F	2-2 / 19	61.4	59.3	2.1	2.1	M-206, M-207, M-209, M-210, M-212, M-215, M-216
M-222/ST-37	F	2-2 / 19	68.4	69.1	-0.7	0	—
M-236/ST-38	F	2-2 / 19	64.6	64.8	-0.2	0	—
M-235/ST-39	F	2-2 / 20	59.1	71.2	-2.1	-2.1	—
M-238/ST-40	F	2-2 / 20	55.0	56.2	-1.2	0	—
M-244/ST-41	G	2-2 / 23	62.6	66.4	-3.8	-3.8	—
M-245/ST-42	G	2-2 / 24	65.6	66.9	-1.3	0	—
M-248/ST-43	G	2-2 / 24	59.0	56.7	2.3	2.3	M-249
M-247/ST-44	G	2-2 / 25	74.6	74.0	0.6	0	—
M-254/ST-45	G	2-2 / 24	65.8	65.7	0.1	0	—
M-263/ST-46	G	2-2 / 25	61.7	60.1	1.6	0	—
M-273/ST-47	G	2-2 / 25	59.4	58.9	0.5	0	—
M-274/ST-48	G	2-2 / 26	68.4	70.4	-2.0	-2.0	M-274A, M-274B
M-278/ST-49	G	2-2 / 25	69.1	69.4	-0.3	-0.3	—
M-283/ST-50	G	2-2 / 26	62.1	59.9	2.2	2.2	M-282, M-285 through M-289
M-293/ST-51	G	2-2 / 26	54.5	55.0	-0.5	0	—
M-295/ST-52	G	2-2 / 26 & 27	63.4	64.0	-0.6	0	—

Table 2-79. Comparison of Measured and Modeled Sound Levels in the TNM (continued)

Measurement Site	Area	Figure / Sheet	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dB)	K-Factor Used	K-Factor Applied to Additional Modeled Receiver(s)
M-304/ST-53	G	2-2 / 27	48.7	49.0	-0.3	0	—
M-306/ST-54	G	2-2 / 28	72.2	71.9	0.3	0	—

^a. Construction of the new Baseline Road interchange was ongoing at the time of measurements. Some of the improvements were in various phases of construction (specifically the SB on- and off-ramps and the NB on- and off-ramps); however, the noise barrier included in the design had not been constructed at the time. For the purposes of calibration, the existing Baseline Road alignment and topography were used because the interim design could not be accurately modeled. The differences between the measured and modeled noise levels for receivers ST-30, ST32, ST33, and ST-34 are shown in **Table 2-69**, above. For the purposes of calibration, K-factors would not be included because of the inability to model an interim design of the new Baseline Road interchange project.

2.2.7.3 Environmental Consequences

No Build Alternative

The No Build Alternative would maintain the existing lane configuration for I-15. Under the No Build Alternative, with the exception of the RCTC I-15 Tolloed Express Lanes Project (EA 0J0800), no capital expenditures would be made to implement Express Lanes on I-15 within the project limits. Additional land areas would not be affected, and existing and projected traffic congestion would continue to deteriorate.

No Build traffic noise level results presented in **Table 2-81** indicate that 67 modeled locations representative of 104 Activity Category B receptors, eight modeled locations representative of 13 Activity Category C receptors, and three modeled locations representative of three Activity Category E receptors would approach or exceed the respective noise abatement criteria (67 dBA L_{eq} (h) [B and C] and 72 dBA L_{eq} (h) [E]). No abatement would be provided for impacts under the No Build alternative.

Build Alternative

The project meets the criteria for a Type 1 Project, as it would involve the addition of through lanes. The geometry of the project study area relative to nearby existing land uses was modeled and future permitted land uses were identified by contacting San Bernardino County and the local city planning staff. Information provided by the County and cities indicates that there are planned and permitted development projects that would fall under Activity Category C in the vicinity of the project. In addition, following are other planned and programmed infrastructure projects along the project corridor that have been considered in the noise analysis:

Temporary

During construction of the Build Alternative, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02 (2015 Edition), "Noise Control," of the 2015 Standard Specifications and Special Provisions. In conjunction with adhering to Caltrans' Standard Specifications and Special Provisions, the contractor will, as practicable and applicable, implement additional noise reducing measures, including changing the location of stationary construction equipment, turning off idling equipment during construction activities, rescheduling construction activities as necessary to be in conformance with applicable requirements, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources as necessary in conformance with applicable requirements.

Two types of short-term noise impacts would occur during project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the project site, which would incrementally raise noise levels on access roads leading to the project construction site. The pieces of heavy equipment for grading and construction activities would be moved on-site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. A high single-event noise exposure potential at a maximum level of 87 dBA maximum noise level (L_{max}) from trucks passing at 50 feet would exist. However, the projected construction traffic

would be minimal when compared with existing traffic volumes on I-15 and other affected streets, and the associated noise level change would not be perceptible. Therefore, construction-related worker commutes and equipment transport noise impacts would be short-term and would not be adverse.

The second type of short-term noise impact would be from construction activities. Construction is performed in distinct steps, each of which has its own mix of equipment and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated and the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. **Table 2-80** lists typical construction equipment noise levels (L_{\max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Table 2-80. Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA L_{\max} at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA L_{\max} at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86
dBA = A-weighted decibels L_{\max} = maximum instantaneous noise level Source: Bolt, Beranek & Newman 1987.		

Typical noise levels at 50 feet from an active construction area could reach 91 dBA L_{\max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavation machinery such as backhoes, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction

equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

Construction of the proposed project is expected to require the use of earthmovers, bulldozers, paving machines, water trucks, dump trucks, concrete trucks, rollers, and pickup trucks. Noise associated with the use of construction equipment is estimated to be between 79 and 89 dBA L_{max} at a distance of 50 feet from the active construction area for the grading phase. As seen in **Table 2-80**, the maximum noise level generated by each earthmover is assumed to be approximately 86 dBA L_{max} at 50 feet from the earthmover in operation. Each bulldozer would generate approximately 85 dBA L_{max} at 50 feet. The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA.

Each piece of construction equipment operates as an individual point source. The worst-case composite noise level at the nearest residence during this phase of construction would be 91 dBA L_{max} (at a distance of 50 feet from an active construction area).

In addition to the standard construction equipment, the project would require the use of pile drivers at two locations (Victoria Street and Cherry Avenue under crossings). All other locations in close proximity to noise sensitive receptors where pile driving would be necessary (generally between Foothill Boulevard and the northern terminus of the project limits) will use Cast in Drilled Hole (CIDH) pile driving which would be considerably quieter than driven piles. As shown in **Table 2-80**, pile driving generates noise levels of up to 96 dBA L_{max} at 50 feet.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with applicable local noise standards and Caltrans' Standard Specification in Section 14-8.02, "Noise Control," of the 2015 Standard Specifications and Special Provisions and applicable local noise standards.

Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. Furthermore, implementation of the measures listed in Section 2.2.7.4 would further minimize the temporary noise impacts from construction.

Permanent

As discussed in the Methodology section, traffic noise levels were predicted using the FHWA TNM, version 2.5. The project meets the criteria for a Type 1 Project (addition of through lanes), and the TNM model included the project design for the one to two TELs and any outside widening and/or retaining walls. During the Design Year, the geometry for the Duncan Canyon interchange and the Baseline interchange modeled in their completed form. The modeling also included the planned I-10 Corridor project alignment, but did not include two direct TEL connectors at the I-15/I-10 interchange (one in the northwest quadrant of the interchange that connects SB I-15 to WB I-10 and EB I-10 to NB I-15 and one in the southwest quadrant that connects NB I-15 to WB I-10 and EB I-10 to SB I-15). These connectors are scheduled to be built by the 2045 Design Year, but were not included in the modeling analysis because the geometry for these connectors has not been finalized.

Traffic volumes modeled in the GP lanes would have a maximum capacity of 1,850 vphpl at the design speed and the TEL would have a maximum capacity of 1,600 vphpl during the Design Year if the volumes presented in the Traffic Study Report exceeded that volume.

Table 2-81 below shows the design-year build conditions traffic noise level results. The results of the traffic noise analysis indicate that predicted traffic noise levels for the Design Year (2045) would:

- approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category B land uses within Areas E through G and Activity Category C land uses within Areas B, C, and G and
- approach or exceed the NAC of 72 dBA $L_{eq}(h)$ for Activity Category E land uses within Areas B, C, and E.

Receptors where traffic noise levels are predicted to approach or exceed the NAC during the Design Year Build condition are discussed in more detail below.

Area A (South of the SR-60/I-15 Interchange)

The traffic noise modeling results indicate that future worst-hour traffic noise levels within Area A would range from 62 dBA $L_{eq}(h)$ at modeled location M-6A to 77 dBA $L_{eq}(h)$ at modeled location M-1A under the Design Year Build conditions. Design Year with project noise levels are predicted to increase relative to existing worst-hour traffic noise levels by approximately 0 to 3 dB. Based on their land use category, no modeled receivers are predicted to approach or exceed any NAC. Therefore, traffic noise impacts are not predicted to occur in Area A and noise abatement does not need to be considered.

Area B (North of the SR-60/I-15 Interchange, South of the Jurupa Street Interchange)

The traffic noise modeling results in **Table 2-81** indicate that future design-year with project worst-hour traffic noise levels within Area B would range from 61 dBA $L_{eq}(h)$ at modeled location M-16 to 78 dBA $L_{eq}(h)$ at modeled location M-14A. Design Year with Project noise levels are predicted to increase relative to existing worst-hour traffic noise levels by approximately 0 to 4 dB in this area. Four modeled receptors (M-9, M-11, M-12, and M-14) would approach or exceed the NAC for Land Use Category C (M-9 and M-11) and E (M-12 and M-14) land uses. As traffic noise impacts are predicted at noise-sensitive land uses; noise abatement must be considered and is discussed in **Section 2.2.7.4** below.

Area C (North of Jurupa Street Interchange, South of the I-10/I-15 Interchange)

The traffic noise modeling results in **Table 2-81** indicate that future Design Year with Project worst-hour traffic noise levels within Area B would range from 58 dBA $L_{eq}(h)$ at modeled location M-17 to 73 dBA $L_{eq}(h)$ at modeled location M-22. Design-year with project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately -1 to 3 dB in this area. The 1 dB decrease is associated with the design of the I-15 alignment and a three-foot safety shape barrier to be located at the edge of the traveled way on top of a retaining wall. Four modeled receptors (M-18, M-18A, M-18B, and M-23) would approach or exceed the NAC for Land Use Category C (M-18, M-18A, and M-18B) and E (M-23) land uses. As traffic noise impacts are predicted at noise-sensitive land uses; noise abatement must be considered and is discussed in **Section 2.2.7.4** below.

Area D (North of the I-10/I-15 Interchange, South of the Foothill Boulevard Interchange)

The traffic noise modeling results in **Table 2-81** indicate that future worst-hour traffic noise levels within Area D would range from 60 dBA $L_{eq}(h)$ at modeled locations M-35 and M-44 to 77 dBA $L_{eq}(h)$ at modeled location M-34C under the Design Year Build conditions. Design-year with project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately -1 to 4 dB. The 1 dB decrease is associated with the design of the I-15 alignment and a three-foot safety shape barrier located at the edge of the traveled way on top of a retaining wall. The future noise level at one modeled receiver (M-28) is predicted to approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category C land use. The design-year noise level at modeled location M-28 is predicted to be 67 dBA $L_{eq}(h)$. This modeled location is representative of one receptor (a vocational school), but it falls under two Activity Categories, C and D. Activity Category D is an interior standard of 52 dBA $L_{eq}(h)$. Based on a typical 25 dB exterior-to-interior transmission loss (Caltrans 2013a), future interior noise levels at receiver M-28 would not approach or exceed the NAC of 52 dBA $L_{eq}(h)$. At this location, Design Year exterior noise levels would approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category C land uses. However, because no exterior areas of frequent human use exist at this location, a noise barrier was not considered. Therefore, although traffic noise impacts are predicted to occur at one modeled receptor in Area D, noise abatement does not need to be considered.

Area E (North of Foothill Boulevard Interchange, South of the Baseline Road Interchange)

The traffic noise modeling results in **Table 2-81** indicate that future design-year with project worst-hour traffic noise levels within Area E would range from 56 dBA $L_{eq}(h)$ at modeled locations M-56, M-61, M-79, and M-80 to 75 dBA $L_{eq}(h)$ at modeled location M-66. Design-year with project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately 0 to 6 dB in this area. Sixty-six modeled receptors would approach or exceed the NAC for Land Use Category B (M-52 through M-55, M-57 through M-60, M-63 through M-77, M-81 through M-83, M-88, M-90, M-93, M-96 through M-99, M-101 through M-103, M-106, M-108, M-109, M-111, M-112, M-116, M-117, M-119, M-120, M-123, M-127, M-129, M-135, M-138, M-146, M-148, M-149, M-149B, M-150, M-150A, and M-151A through M-156) and E (M-45A) land uses. As traffic noise impacts are predicted at noise-sensitive land uses; noise abatement must be considered and is discussed in **Section 2.2.7.4** below.

Area F (North of Baseline Road Interchange, South of the SR-210/I-15 Interchange)

The traffic noise modeling results in **Table 2-81** indicate that future design-year with project worst-hour traffic noise levels within Area F would range from 56 dBA $L_{eq}(h)$ at modeled locations M-194 and M-202 to 77 dBA $L_{eq}(h)$ at modeled location M-236B. Design-year with project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately -7 to 4 dB in this area. The 7-dB decrease would occur at modeled location M-194. Modeled locations surrounding this receptor (M-189 through M-201) would also see decreases on the order of 1 to 5 dB. This decrease is associated with the design of the Baseline Road interchange and the barrier design along the SB off-ramp to Baseline Road. Six modeled receptors would approach or exceed the NAC for Land Use Category B (M-219 through M-221, M-225, M-228, and M-230). As traffic noise impacts are predicted at noise-sensitive land uses; noise abatement must be considered and is discussed in **Section 2.2.7.4** below.

Area G (North of the SR-210/I-15 Interchange to the Project Terminus, North of Duncan Canyon Road)

The traffic noise modeling results in **Table 2-81** indicate that future worst-hour design-year with project traffic noise levels within Area G would range from 54 dBA $L_{eq}(h)$ at modeled locations M-304 to 78 dBA $L_{eq}(h)$ at modeled location M-247. Design Year with Project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately 0 to 4 dB in this area. Traffic noise impacts are predicted at noise-sensitive land uses in Area G; therefore, noise abatement must be considered. Six modeled receptors would approach or exceed the NAC for Land Use Category B (M-260, M-267, M-285 through M-287, and M-289) and three modeled receptors would approach or exceed the NAC for Land Use Category C (M-244, M-295, and M-296) land uses. As traffic noise impacts are predicted at noise-sensitive land uses; noise abatement must be considered and is discussed in **Section 2.2.7.4** below.

Eight modeled locations (M 260, M-267, M-285, M-286, M-287, M-289, M-295, and M-296) are predicted to approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category B and C land uses during the Design Year. All eight of these modeled locations have existing property line barriers that provide noise attenuation in the areas of frequent human use modeled at these locations. The existing property line walls range in height from six-foot property line walls to 12-foot property line walls. In accordance with Caltrans guidance, **Table 2-82** provides a comparison between the Design Year Build condition, both with the existing property line barriers modeled at their respective heights and with the property line barriers removed. **Table 2-82** shows that all existing property line barriers meet the design goal for a 7 dB insertion loss at one modeled location and a 5 dB insertion loss at the affected modeled locations, as required by the Protocol. With this finding, the existing property line walls are providing adequate insertion loss (based on FHWA-HEP-12-051 and Caltrans guidance). Therefore, no increases in existing property line wall heights need to be considered.

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-1	--	A	--	70	73	73	F (None)	--	--	--	--					
M-1A	--	A	--	75	77	77	G (None)	--	--	--	--					
M-1B	--	A	--	73	75	75	G (None)	--	--	--	--					
M-2	ST-1	A	--	72	74	74	F (None)	--	--	--	--					
M-3	--	A	--	73	74	75	F (None)	--	--	--	--					
M-3A	--	A	--	73	75	75	G (None)	--	--	--	--					
M-3B	--	A	--	67	69	69	G (None)	--	--	--	--					
M-3C	--	A	--	72	74	74	G (None)	--	--	--	--					
M-3D	--	A	--	76	77	77	G (None)	--	--	--	--					
M-4	ST-2	A	--	72	74	74	G (None)	--	--	--	--					
M-5	--	A	--	67	68	68	F (None)	--	--	--	--					
M-6	--	A	--	62	64	64	F (None)	--	--	--	--					
M-6A	--	A	--	61	62	62	G (None)	--	--	--	--					
M-7	ST-3	A	--	68	68	68	G (None)	--	--	--	--					
M-8	--	B	--	62	64	64	F (None)	--	--	--	--					
M-9	--	B	S-2735	66	68	68	C (67)	65	64	62	61	Yes	No	14	\$92,000	\$1,011,200
M-10	ST-4	B	--	65	67	68	F (None)	--	--	--	--					
M-11	ST-5	B	S-27	72	73	74	C (67)	70	69	68	67	Yes	No	14	\$92,000	\$849,100
M-11A	--	B	--	69	71	69	G (None)	--	--	--	--					
M-12	ST-6	B	S-42	74	75	76	E (72)	71	70	69	69	Yes	No	12	\$92,000	\$422,500
												Yes	No	14	\$92,000	\$466,800
M-12A	--	B	--	63	64	66	G (None)	--	--	--	--					
M-13	ST-7	B	--	62	64	66	F (None)	--	--	--	--					
M-14	--	B	S-70	69	70	72	E (72)	68	66	65	65	Yes	No	12	\$92,000	\$282,900
												Yes	No	14	\$92,000	\$310,700
M-14A	--	B	--	75	76	78	G (None)	--	--	--	--					
M-14B	--	B	--	68	69	71	F (None)	--	--	--	--					
M-15	ST-8	B	--	63	64	65	G (None)	--	--	--	--					
M-16	--	B	S-70	59	60	61	E (72)	60	60	60	60	Yes	No	12	\$92,000	\$282,900
														14	\$92,000	\$310,700
M-17	--	C	--	57	57	58	E (72)	--	--	--	--					
M-18	--	C	S-95	69	70	71	C (67)	68	65	64	63	Yes	Yes	12	\$736,000	\$760,500
M-18A	--	C	S-95	68	69	71	C (67)	68	67	65	63	Yes	No	14	\$736,000	\$838,300
M-18B	--	C	S-95	69	70	70	C (67)	67	67	64	64					
M-20	--	C	--	66	67	67	E (72)	--	--	--	--					
M-21	ST-10	C	--	68	69	70	E (72)	--	--	--	--					
M-22	--	C	--	74	75	73	F (None)	--	--	--	--					
M-23	--	C	S-119	70	71	71	E (72)	67	66	64	64	Yes	No	12	\$92,000	\$497,600
														14	\$92,000	\$542,800
M-24	ST-11	C	--	71	72	72	F (None)	--	--	--	--					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-25	--	C	--	65	66	67	E (72)	--	--	--	--					
M-26	--	C	--	63	63	63	F (None)	--	--	--	--					
M-26A	--	C	--	63	64	64	G (None)	--	--	--	--					
M-27	--	C	--	63	64	65	F (None)	--	--	--	--					
M-28	ST-12	D	--	65	67	67	C (67) /D (Interior 52)	--	--	--	--					
M-29	--	D	--	62	63	63	E (72)	--	--	--	--					
M-30	--	D	--	67	67	67	E (72)	--	--	--	--					
M-31	ST-13	D	--	67	68	68	F (None)	--	--	--	--					
M-31A	--	D	--	66	69	67	G (None)	--	--	--	--					
M-31B	--	D	--	67	68	69	F (None)	--	--	--	--					
M-31C	--	D	--	65	66	67	F (None)	--	--	--	--					
M-32	ST-14	D	--	68	69	70	E (72)	--	--	--	--					
M-32A	--	D	--	67	69	69	E (72)	--	--	--	--					
M-32B	--	D	--	68	71	71	F (None)	--	--	--	--					
M-32C	--	D	--	68	71	71	G (None)	--	--	--	--					
M-33	--	D	--	64	66	66	E (72)	--	--	--	--					
M-34	--	D	--	65	66	65	E (72)	--	--	--	--					
M-34A	--	D	--	71	73	72	F (None)	--	--	--	--					
M-34B	--	D	--	73	75	72	G (None)	--	--	--	--					
M-34C	--	D	--	73	75	77	F (None)	--	--	--	--					
M-34D	--	D	--	71	74	74	F (None)	--	--	--	--					
M-35	ST-15	D	--	57	58	60	E (72)	--	--	--	--					
M-36	--	D	--	67	68	69	E (72)	--	--	--	--					
M-36A	--	D	--	76	77	76	F (None)	--	--	--	--					
M-36B	--	D	--	69	71	70	G (None)	--	--	--	--					
M-36C	--	D	--	68	70	69	F (None)	--	--	--	--					
M-37	ST-16	D	--	72	74	75	F (None)	--	--	--	--					
M-37A	--	D	--	67	70	70	G (None)	--	--	--	--					
M-37B	--	D	--	68	71	71	F (None)	--	--	--	--					
M-38	ST-17	D	--	65	66	65	E (72)	--	--	--	--					
M-39	--	D	--	69	70	68	F (None)	--	--	--	--					
M-39A	--	D	--	68	70	69	G (None)	--	--	--	--					
M-40	--	D	--	67	68	67	F (None)	--	--	--	--					
M-40A	--	D	--	70	71	71	G (None)	--	--	--	--					
M-41	ST-18	D	--	71	72	70	F (None)	--	--	--	--					
M-41A	--	D	--	72	73	72	G (None)	--	--	--	--					
M-42	--	D	--	67	68	69	E (72)	--	--	--	--					
M-42A	--	D	--	70	71	72	F (None)	--	--	--	--					
M-42B	--	E	--	68	69	69	F (None)	--	--	--	--					
M-42C	--	E	--	66	67	68	F (None)	--	--	--	--					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-43	--	D	--	65	67	64	E (72)	--	--	--	--					
M-43A	--	D	--	70	72	71	G (None)	--	--	--	--					
M-43B	--	D	--	69	71	70	F (None)	--	--	--	--					
M-44	ST-19	D	--	58	60	60	E (72)	--	--	--	--					
M-44A	--	D	--	66	68	67	F (None)	--	--	--	--					
M-44B	--	D	--	65	67	67	E (72)	--	--	--	--					
M-45	ST-20	E	--	64	66	66	F (None)	--	--	--	--					
M-45A	--	E	S-310	70	71	72	E (72)	67	66	65	65	Yes	No	12	\$92,000	\$679,400
M-46	--	E	S-310	61	63	63	C (67)	62	62	62	62	Yes	No	14	\$92,000	\$717,000
M-47	--	E	S-344	58	59	60	B (67)	60	59	59	58	Yes	Yes	10	\$5,980,000	\$2,589,800
M-48	--	E	S-344	58	59	60	B (67)	59	59	58	56					
M-49	--	E	S-344	58	59	60	B (67)	59	59	58	57					
M-50	ST-21	E	S-344	56	58	59	B (67)	58	57	56	55					
M-51	--	E	S-344	58	60	61	B (67)	58	58	56	54	Yes	Yes	12	\$9,292,000	\$2,856,000
M-52	--	E	S-344	65	67	68	B (67)	65	64	63	62					
M-53	--	E	S-344	66	68	70	B (67)	64	64	60	58					
M-54	--	E	S-344	67	69	70	B (67)	66	65	63	60					
M-55	--	E	S-344	65	67	68	B (67)	66	65	63	59					
M-56	--	E	S-344	53	55	56	B (67)	54	54	52	51					
M-57	--	E	S-344	65	67	69	B (67)	65	64	63	58	Yes	Yes	14	\$12,604,000	\$3,117,200
M-58	--	E	S-344	62	64	66	B (67)	63	62	60	57					
M-59	--	E	S-344	65	67	69	B (67)	64	63	61	59					
M-60	--	E	S-344	62	65	66	B (67)	62	62	59	57					
M-61	--	E	S-344	53	55	56	B (67)	55	54	53	51	Yes	Yes	10	\$5,980,000	\$2,589,800
M-62	ST-23	E	--	68	69	68	F (--)	--	--	--	--					
M-62A	--	E	S-353	70	71	70	F (--)	70	70	70	70					
M-63	--	E	S-344	63	65	68	B (67)	62	62	59	58					
M-64	--	E	S-344	67	69	72	B (67)	67	64	63	62					
M-65	--	E	S-344	65	67	70	B (67)	65	64	61	60					
M-66	--	E	S-344	69	71	75	B (67)	69	68	64	63					
M-67	--	E	S-344	63	65	69	B (67)	64	63	60	59					
M-68	--	E	S-344	69	70	73	B (67)	67	67	63	62	Yes	Yes	12	\$9,292,000	\$2,856,000
M-69	--	E	S-344	62	64	67	B (67)	62	61	59	58					
M-70	--	E	S-344	64	66	70	B (67)	65	63	61	61					
M-71	--	E	S-344	68	70	73	B (67)	67	67	63	61					
M-72	--	E	S-344	64	67	69	B (67)	65	63	60	59					
M-73	--	E	S-344	67	68	71	B (67)	65	65	61	60					
M-74	--	E	S-344	64	66	68	B (67)	63	63	59	58	Yes	Yes	14	\$12,604,000	\$3,117,200
M-75	--	E	S-344	67	69	71	B (67)	66	65	61	60					
M-76	--	E	S-344	61	63	66	B (67)	62	61	58	57					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-77	--	E	S-344	64	66	69	B (67)	64	64	61	60					
M-78	--	E	S-344	58	60	63	B (67)	59	59	57	55					
M-79	--	E	S-344	54	56	56	B (67)	55	54	52	51					
M-80	--	E	S-344	54	56	56	B (67)	55	54	52	51					
M-81	--	E	S-344	64	66	68	B (67)	64	63	60	59	Yes	Yes	10	\$5,980,000	\$2,589,800
M-82	--	E	S-344	63	65	67	B (67)	63	62	59	58					
M-83	--	E	S-344	64	66	67	B (67)	64	63	60	59					
M-84	--	E	S-344	60	62	63	B (67)	61	61	58	57					
M-85	ST-22	E	S-344	56	58	59	B (67)	56	56	54	53	Yes	Yes	12	\$9,292,000	\$2,856,000
M-86	--	E	S-344	56	58	59	B (67)	57	57	55	53					
M-87	--	E	S-344	55	57	57	B (67)	55	55	53	53					
M-88	--	E	S-344	64	66	67	B (67)	64	63	61	60					
M-89	--	E	S-344	61	64	64	B (67)	62	61	59	59					
M-90	--	E	S-344	65	67	68	B (67)	65	64	62	62					
M-91	--	E	S-344	60	61	61	B (67)	61	60	60	60					
M-92	--	E	S-344	63	64	64	B (67)	64	64	63	63					
M-93 ¹	ST-24	E	S-344	65	66	67	B (67)	66	65	65	65					
M-94	--	E	S-344	60	62	63	B (67)	61	60	58	58					
M-95	--	E	S-344	62	64	65	B (67)	63	62	61	60					
M-96	--	E	S-344	69	72	72	B (67)	69	69	69	69					
M-97	--	E	S-344	67	69	69	B (67)	67	67	66	66					
M-98	--	E	S-344	66	68	68	B (67)	67	66	65	65					
M-99	--	E	S-344	65	67	67	B (67)	66	64	64	64					
M-100	--	E	S-344	62	65	65	B (67)	64	62	62	62					
M-101	--	E	S-353	70	72	72	B (67)	70	69	69	69	Yes	No		\$644,000	\$2,001,300
M-102	--	E	S-353	70	71	71	B (67)	68	67	66	66					
M-103	ST-25	E	S-353	68	69	70	B (67)	66	66	64	63					
M-104	--	E	S-353	59	60	60	B (67)	60	60	59	59	Yes	Yes		\$2,208,000	\$2,200,900
M-105	--	E	S-353	60	61	62	B (67)	61	60	59	58					
M-106	--	E	S-353	66	67	68	B (67)	66	65	64	64					
M-107	--	E	S-353	60	61	62	B (67)	60	60	59	58	Yes	Yes		\$3,496,000	\$2,396,300
M-108	--	E	S-353	68	70	70	B (67)	68	66	65	65					
M-109	--	E	S-353	67	69	69	B (67)	67	64	63	62					
M-109A	--	E	--	72	73	73	G (None)	--	--	--	--	Yes	Yes	10	\$5,980,000	\$2,589,800
M-110	ST-26	E	S-344	63	65	65	B (67)	62	62	62	61					
M-111	--	E	S-344	64	66	66	B (67)	64	62	61	60					
M-112	--	E	S-344	66	69	69	B (67)	65	63	62	62					
M-113	--	E	S-344	61	63	63	B (67)	60	59	58	57	Yes	Yes	12	\$9,292,000	\$2,856,000
M-114	--	E	S-344	60	62	63	B (67)	60	59	58	57					
M-115	--	E	S-344	63	65	65	B (67)	63	60	59	58					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-116	--	E	S-344	66	68	68	B (67)	65	63	63	62	Yes	Yes	14	\$12,604,000	\$3,117,200
M-117	--	E	S-344	68	69	69	B (67)	65	63	62	61					
M-118	--	E	S-344	61	63	63	B (67)	59	58	57	57					
M-119	--	E	S-344	63	65	66	B (67)	62	61	60	59					
M-120	--	E	S-344	64	65	66	B (67)	61	60	59	58					
M-121	--	E	S-344	62	64	64	B (67)	61	59	58	57	Yes	Yes	10	\$5,980,000	\$2,589,800
M-122	--	E	S-344	60	63	63	B (67)	60	58	57	56					
M-123	--	E	S-344	67	68	69	B (67)	64	63	62	61					
M-124	--	E	S-344	64	65	65	B (67)	63	60	59	59					
M-125	--	E	S-344	60	62	62	B (67)	61	60	59	59					
M-126	--	E	S-344	62	63	64	B (67)	60	60	59	58	Yes	Yes	12	\$9,292,000	\$2,856,000
M-127	--	E	S-344	65	67	67	B (67)	63	61	61	60					
M-128	--	E	S-344	58	59	58	B (67)	57	56	55	54					
M-129	--	E	S-344	65	66	66	B (67)	64	61	61	60					
M-130	--	E	S-344	62	63	63	B (67)	60	60	57	57					
M-131	--	E	S-344	60	62	63	B (67)	59	59	57	56	Yes	Yes	14	\$12,604,000	\$3,117,200
M-132	--	E	S-344	61	64	64	B (67)	60	59	58	57					
M-133	ST-28	E	S-344	61	63	64	B (67)	60	60	59	59					
M-134	--	E	S-344	64	65	65	B (67)	63	62	61	60					
M-135	--	E	S-344	65	67	67	B (67)	64	64	62	61					
M-136	--	E	S-344	60	62	62	B (67)	58	57	57	56	Yes	Yes	10	\$5,980,000	\$2,589,800
M-137	--	E	S-344	60	63	63	B (67)	59	59	58	57					
M-138	--	E	S-344	64	66	67	B (67)	64	63	62	62					
M-139	--	E	S-344	61	63	64	B (67)	62	60	60	59					
M-139A	--	E	--	68	72	71	F (None)	--	--	--	--					
M-139B	--	E	--	67	70	70	G (None)	--	--	--	--	Yes	Yes	12	\$9,292,000	\$2,856,000
M-140	--	E	S-344	61	63	63	B (67)	63	63	63	63					
M-141	--	E	S-344	63	65	65	B (67)	65	65	65	65					
M-142	ST-30	E	S-344	63	65	65	B (67)	65	65	65	65					
M-142A	--	E	--	65	68	68	F (None)	--	--	--	--					
M-143	--	E	--	57	59	60	E (72)	--	--	--	--	Yes	No	10	\$644,000	\$2,001,300
M-144	--	E	S-353	63	65	65	B (67)	61	61	60	59					
M-145	--	E	S-353	63	65	64	B (67)	60	60	58	57					
M-145A	--	E	S-353	62	64	64	B (67)	61	60	58	57					
M-145B	--	E	S-353	62	64	64	B (67)	62	62	61	60					
M-145C	--	E	S-353	63	64	65	B (67)	61	60	59	57	Yes	Yes	12	\$2,208,000	\$2,200,900
M-146	--	E	S-353	67	69	70	B (67)	66	65	64	63					
M-147	--	E	S-353	61	63	63	B (67)	61	61	60	59					
M-147A	--	E	S-353	60	62	62	B (67)	59	58	57	55					
M-148	--	E	S-353	65	66	67	B (67)	63	63	61	60					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-149	--	E	S-353	63	65	66	B (67)	63	63	61	60	Yes	Yes	14	\$3,496,000	\$2,396,300
M-149A	--	E	S-353	63	65	65	B (67)	63	63	61	60					
M-149B	--	E	S-353	66	68	68	B (67)	67	67	66	64					
M-150	--	E	S-353	63	65	66	B (67)	63	63	62	61					
M-150A	--	E	S-353	67	69	69	B (67)	67	66	65	63					
M-151	ST-27	E	S-353	62	63	64	B (67)	62	61	60	59					
M-151A	--	E	S-353	66	68	68	B (67)	65	64	63	62					
M-151B	--	E	S-353	64	66	66	B (67)	64	63	63	62	Yes	No	10	\$644,000	\$2,001,300
M-152	--	E	S-353	64	65	66	B (67)	64	63	62	61					
M-152A	--	E	S-353	66	68	68	B (67)	65	64	63	62					
M-153	--	E	S-353	65	67	67	B (67)	64	63	62	61					
M-153A	--	E	S-353	64	66	66	B (67)	64	63	63	61	Yes	Yes	12	\$2,208,000	\$2,200,900
M-154	--	E	S-353	67	69	70	B (67)	67	66	65	64					
M-155	--	E	S-353	71	73	74	B (67)	68	66	65	63					
M-156	--	E	S-353	64	66	67	B (67)	63	63	63	63					
M-157	--	E	S-353	61	62	63	B (67)	62	61	60	59					
M-158	--	E	S-353	61	63	64	B (67)	62	62	60	60				\$3,496,000	\$2,396,300
M-159	--	E	S-353	63	64	65	B (67)	61	60	59	59					
M-160	--	E	S-353	59	62	63	B (67)	62	62	61	61					
M-161	--	E	S-353	60	62	63	B (67)	63	62	61	61					
M-162	--	E	--	63	64	65	B (67)	--	--	--	--					
M-163	--	E	--	63	64	65	B (67)	--	--	--	--					
M-164	--	E	--	60	62	62	B (67)	--	--	--	--					
M-165	--	E	--	58	60	61	B (67)	--	--	--	--					
M-166	ST-29A	E	--	59	61	61	C (67)	--	--	--	--					
M-167	--	E	--	62	64	65	B (67)	--	--	--	--					
M-168	--	E	--	58	60	61	B (67)	--	--	--	--					
M-169	--	E	--	56	57	58	B (67)	--	--	--	--					
M-170	--	E	--	58	59	60	B (67)	--	--	--	--					
M-171 ¹	ST-29B	E	--	62	64	64	B (67)	--	--	--	--					
M-172	--	E	--	62	64	65	B (67)	--	--	--	--					
M-173	--	E	--	62	63	64	B (67)	--	--	--	--					
M-174	--	E	--	56	58	59	B (67)	--	--	--	--					
M-175	--	E	--	58	59	59	B (67)	--	--	--	--					
M-176	ST-31	F	--	60	62	62	B (67)	--	--	--	--					
M-177	--	F	--	60	63	63	B (67)	--	--	--	--					
M-178	--	F	--	60	62	63	B (67)	--	--	--	--					
M-179	--	F	--	61	60	61	B (67)	--	--	--	--					
M-180	--	F	--	58	57	58	B (67)	--	--	--	--					
M-181	--	F	--	58	58	59	B (67)	--	--	--	--					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-182	--	F	--	58	56	57	B (67)	--	--	--	--					
M-183	--	F	--	58	57	57	B (67)	--	--	--	--					
M-184	--	F	--	64	65	65	B (67)	--	--	--	--					
M-185	--	F	--	59	60	61	B (67)	--	--	--	--					
M-186	ST-32	F	--	68	68	68	F (None)	--	--	--	--					
M-187	--	F	--	61	62	62	B (67)	--	--	--	--					
M-188	--	F	--	61	61	61	B (67)	--	--	--	--					
M-189	--	F	--	60	59	59	B (67)	--	--	--	--					
M-190	--	F	--	61	60	61	B (67)	--	--	--	--					
M-191	--	F	--	60	58	59	B (67)	--	--	--	--					
M-192	--	F	--	60	58	58	B (67)	--	--	--	--					
M-193	--	F	--	62	57	58	B (67)	--	--	--	--					
M-194	--	F	--	63	56	56	B (67)	--	--	--	--					
M-195	--	F	--	60	56	57	B (67)	--	--	--	--					
M-196	--	F	--	62	59	60	B (67)	--	--	--	--					
M-197	--	F	--	62	58	59	B (67)	--	--	--	--					
M-198	--	F	--	64	63	64	B (67)	--	--	--	--					
M-199	--	F	--	65	62	62	B (67)	--	--	--	--					
M-200	--	F	--	63	60	60	B (67)	--	--	--	--					
M-201	--	F	--	58	56	57	B (67)	--	--	--	--					
M-202	--	F	--	56	56	56	B (67)	--	--	--	--					
M-203	ST-33	F	--	63	63	63	C (67)	--	--	--	--					
M-204	--	F	--	61	62	63	B (67)	--	--	--	--					
M-205	--	F	--	60	61	62	B (67)	--	--	--	--					
M-206	--	F	--	60	61	62	B (67)	--	--	--	--					
M-207	--	F	--	59	60	60	B (67)	--	--	--	--					
M-208	--	F	S-411	61	63	64	B (67)	63	63	63	63	Yes	No	12	\$644,000	\$857,600
M-209	--	F	S-411	58	60	60	B (67)	60	60	60	60					
M-210	--	F	S-411	62	64	64	B (67)	63	63	63	63					
M-211	--	F	S-411	57	59	60	B (67)	60	60	60	60					
M-212	--	F	S-411	59	60	61	B (67)	59	58	58	58					
M-213	--	F	S-411	61	63	63	B (67)	61	61	60	60					
M-214	ST-36	F	S-411	61	63	63	B (67)	61	60	59	58	Yes	Yes	14	\$1,012,000	\$924,000
M-215	--	F	S-411	61	63	63	B (67)	59	58	57	56					
M-216	--	F	S-411	63	64	65	B (67)	61	60	58	58					
M-217	--	F	S-411	62	64	64	B (67)	61	60	57	57					
M-218	--	F	S-411	59	61	61	B (67)	59	58	56	56					
M-219	--	F	S-411	66	68	68	B (67)	66	66	64	63					
M-220	--	F	S-411	66	68	68	B (67)	66	66	63	62					
M-221	--	F	S-411	68	70	70	B (67)	68	68	65	64					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-222	ST-37	F	--	69	71	71	G (None)	--	--	--	--					
M-223	--	F	S-396	63	65	66	E (72)	64	63	61	61	Yes	Yes	10	\$828,000	\$901,600
M-224	ST-34	F	S-396	64	67	67	E (72)	66	64	63	63					
M-225	--	F	S-396	63	66	66	B (67)	61	60	59	58	Yes	Yes	12	\$920,000	\$990,700
M-226	--	F	S-396	61	64	65	B (67)	61	60	59	59					
M-227	--	F	S-396	61	64	64	B (67)	61	59	58	57	Yes	No	14	\$920,000	\$1,090,000
M-228	--	F	S-396	63	66	66	B (67)	61	59	59	58					
M-229	--	F	S-396	62	65	65	B (67)	61	60	59	58					
M-230	--	F	S-396	63	66	66	B (67)	61	59	58	58					
M-231	ST-35	F	--	59	62	63	F (None)	--	--	--	--					
M-232	--	F	S-396	58	61	61	B (67)	57	56	55	55	Yes	Yes	10	\$828,000	\$901,600
M-233	--	F	S-396	60	63	63	B (67)	60	58	57	57	Yes	Yes	12	\$920,000	\$990,700
M-234	--	F	S-396	61	64	64	B (67)	61	59	59	58	Yes	No	14	\$920,000	\$1,090,000
M-234A	--	F	--	66	69	69	G (None)	--	--	--	--					
M-235	ST-39	F	--	67	70	70	G (None)	--	--	--	--					
M-235A	--	F	--	61	63	63	G (None)	--	--	--	--					
M-235B	--	F	--	70	72	73	G (None)	--	--	--	--					
M-236	ST-38	F	--	64	66	67	G (None)	--	--	--	--					
M-236A	--	F	--	59	61	62	G (None)	--	--	--	--					
M-236B	--	F	--	75	77	77	F (None)	--	--	--	--					
M-236C	--	F	S-411	62	64	65	C (67)	64	64	63	63	Yes	No	12	\$644,000	\$857,600
												Yes	Yes	14	\$1,012,000	\$924,000
M-237	--	F	--	56	58	59	B (67)	--	--	--	--					
M-238 ¹	ST-40	F	--	56	58	59	B (67)	--	--	--	--					
M-239	--	F	--	57	59	59	B (67)	--	--	--	--					
M-240	--	F	--	56	58	58	B (67)	--	--	--	--					
M-241	--	F	--	56	58	59	B (67)	--	--	--	--					
M-242	--	F	--	58	61	61	B (67)	--	--	--	--					
M-243	--	F	--	61	63	63	B (67)	--	--	--	--					
M-243A	--	G	--	66	69	69	G (None)	--	--	--	--					
M-243B	--	G	--	74	76	76	G (None)	--	--	--	--					
M-243C	--	G	--	68	71	71	G (None)	--	--	--	--					
M-243D	--	G	--	73	75	75	G (None)	--	--	--	--					
M-243E	--	G	--	67	67	67	G (None)	--	--	--	--					
M-243F	--	F	--	62	64	65	G (None)	--	--	--	--					
M-244	ST-41	G	S-492	63	66	66	C (67)	63	62	59	59	Yes	No	12	\$92,000	\$750,800
												Yes	No	14	\$92,000	\$814,300
M-244A	--	G	--	61	63	61	B (67)	--	--	--	--					
M-244B	--	G	--	73	75	75	G (None)	--	--	--	--					
M-244C	--	G	--	72	74	73	G (None)	--	--	--	--					

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-244D	--	G	--	62	64	62	B (67)	--	--	--	--					
M-244E	--	G	--	60	63	61	B (67)	--	--	--	--					
M-245	ST-42	G	--	68	71	70	G (None)	--	--	--	--					
M-246	--	G	--	58	60	59	E (72)	--	--	--	--					
M-247	ST-44	G	--	75	78	78	F (None)	--	--	--	--					
M-248	ST-43	G	--	61	63	63	B (67)	--	--	--	--					
M-249	--	G	--	60	63	63	B (67)	--	--	--	--					
M-250	--	G	--	56	59	60	B (67)	--	--	--	--					
M-251	--	G	--	57	60	60	B (67)	--	--	--	--					
M-252	--	G	--	57	60	60	B (67)	--	--	--	--					
M-253	--	G	--	54	57	58	B (67)	--	--	--	--					
M-254	ST-45	G	--	66	69	68	F (None)	--	--	--	--					
M-255	--	G	S-559 EOS	60	63	63	B (67)	63	63	62	61	No	No			
M-256	--	G	S-559 EOS	53	56	57	B (67)	57	57	57	57					
M-257	--	G	S-559 EOS	62	65	65	B (67)	64	64	63	62	No	No			
M-258	--	G	S-559 EOS	61	64	64	B (67)	63	63	62	61					
M-259	--	G	S-559 EOS	62	65	64	B (67)	63	63	62	61					
M-260	--	G	S-559 EOS	62	65	65	B (67)	63	62	61	60					
M-261	--	G	S-559 EOS	57	60	61	B (67)	61	60	59	58					
M-262	--	G	S-559 EOS	57	60	61	B (67)	61	60	59	58					
M-263	ST-46	G	--	61	64	63	B (67)	--	--	--	--					
M-264	--	G	S-559 EOS	60	63	63	B (67)	62	61	60	59					
M-265	--	G	S-559 EOS	63	66	65	B (67)	64	63	62	60					
M-266	--	G	S-559 EOS	56	59	59	B (67)	59	58	57	55					
M-267	--	G	S-559 EOS	56	59	59	B (67)	59	58	57	55					
M-268	--	G	S-559 EOS	63	65	65	B (67)	63	62	61	60					
M-269	--	G	S-559 EOS	57	60	60	B (67)	59	59	58	57					
M-270	--	G	S-559 EOS	59	62	62	B (67)	61	61	59	59					
M-271	--	G	S-559 EOS	60	63	63	B (67)	62	61	60	59					
M-272	--	G	S-559 EOS	63	66	65	B (67)	63	62	60	59					
M-273	ST-47	G	S-559 EOS	59	62	62	B (67)	60	59	57	57					
M-273A	--	G	--	73	75	75	G (None)	--	--	--	--					
M-274	ST-48	G	--	69	72	71	G (None)	--	--	--	--					
M-274A	--	G	--	62	65	62	C (67)	--	--	--	--					
M-274B	--	G	--	73	76	76	G (None)	--	--	--	--					
M-275	--	G	S-559 EOS	57	60	60	B (67)	59	59	58	56	No	No			
M-276	--	G	S-559 EOS	53	56	57	B (67)	56	56	56	55					
M-277	--	G	S-559 EOS	58	61	61	B (67)	59	58	58	56					
M-278	ST-49	G	--	72	74	74	G (None)	--	--	--	--					
M-279	--	G	S-559 EOS	60	63	62	B (67)	60	60	59	58	No	No			

Table 2-81. Noise Levels for Existing, Future No Build, and Future Build (continued)

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year (2045) Noise Level without Project (No Build) (dBA)	Design Year (2045) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)				Noise Abatement				
								8-foot wall	10-foot wall	12-foot wall	14-foot wall	Feasible/ Design Goal Met	Reasonable	Barrier Height (FT)	Total Allowable Cost	Construction Cost
M-280	--	G	S-559 EOS	61	64	64	B (67)	62	62	60	59					
M-281	--	G	S-559 EOS	57	60	60	B (67)	60	59	59	57					
M-282	--	G	S-559 EOS	62	65	65	B (67)	63	63	62	61					
M-283	ST-50	G	S-559 EOS	62	65	64	B (67)	63	63	62	61					
M-284	--	G	S-559 EOS	54	57	58	B (67)	58	58	58	57					
M-285	--	G	S-559 EOS	63	66	66	B (67)	64	64	63	61					
M-286	--	G	S-559 EOS	63	66	66	B (67)	64	64	63	61					
M-287	--	G	S-559 EOS	63	66	66	B (67)	64	64	63	61					
M-288	--	G	S-559 EOS	62	65	65	B (67)	64	63	63	61					
M-289	--	G	S-559 EOS	63	66	66	B (67)	64	63	62	60					
M-290	--	G	S-559 EOS	58	61	61	B (67)	61	60	59	58					
M-291	--	G	S-559 EOS	61	64	64	B (67)	62	61	60	59					
M-292	--	G	S-559 EOS	58	61	61	B (67)	60	60	59	58					
M-293	ST-51	G	S-559 EOS	57	60	60	B (67)	60	59	58	57					
M-294	--	G	S-559 EOS	63	66	66	F (None)	64	63	62	61					
M-295	ST-52	G	S-559 EOS	64	67	66	C (67)	65	65	64	63	No	No			
M-296	--	G	S-559 EOS	63	66	66	C (67)	65	64	63	64					
M-297	--	G	S-559 EOS	61	64	64	C (67)	64	63	62	63	No	No			
M-298	--	G	--	71	74	73	G (None)	--	--	--	--					
M-299	--	G	S-559 EOS	62	65	65	C (67)	64	64	64	63					
M-300	--	G	S-559 EOS	60	63	63	C (67)	62	61	60	59					
M-301	--	G	S-559 EOS	59	62	62	C (67)	61	61	61	61					
M-302	--	G	S-559 EOS	59	62	62	C (67)	61	61	61	61					
M-303	--	G	--	51	54	55	B (67)	--	--	--	--					
M-304	ST-53	G	--	50	54	54	B (67)	--	--	--	--					
M-305	--	G	--	68	71	71	G (None)	--	--	--	--					
M-306	ST-54	G	--	74	77	77	G (None)	--	--	--	--					
Sources: I-15 CP Noise Study Report, July 2017; and I-15 CP Noise Abatement Decision Report, July 2017.																

Table 2-82. Noise Levels for Existing, Future No Build, and Future Build

Receiver ID	Measurement Location	Area	Barrier ID	Existing (2014) Noise Level (dBA)	Design Year Noise Level with Existing Barriers (Barrier I.D.) set to Zero Height with Project, Leq(h), dBA	Design Year Noise Level with Existing Barriers (Barrier I.D.) with Project, Leq(h), dBA	Design Year Noise Level without Project minus Existing Conditions Leq(h), dBA	Design Year Noise Level with Existing Barriers set to Zero Height minus Noise Level with Existing Barriers at Existing Height Project Conditions L _{eq} (h), dBA	Design Year Noise Level with Project minus Existing Conditions L _{eq} (h), dBA	Activity Category (NAC)	Impact Type (None, or A/E)
M-255	--	G	Property Line Barrier 594	60	68	63	8	5	3	B (67)	None
M-257	--	G		62	74	65	12	9	3	B (67)	None
M-258	--	G		61	68	64	7	4	3	B (67)	None
M-259	--	G		62	70	64	8	6	2	B (67)	None
M-260	--	G		63	71	66	8	5	3	B (67)	A/E
M-267	--	G	Property Line Barrier 627	64	74	67	10	7	3	B (67)	A/E
M-285	--	G	Property Line Barrier 682	63	78	66	15	12	3	B (67)	A/E
M-286	--	G		63	77	66	14	11	3	B (67)	A/E
M-287	--	G		63	78	66	15	12	3	B (67)	A/E
M-289	--	G	Property Line Barriers 894 Barrier 730 Barrier 730 -2	63	78	66	15	12	3	B (67)	A/E
M-295	ST-52	G		64	74	66	10	8	2	C (67)	A/E
M-296	--	G		63	71	66	8	5	3	C (67)	A/E
M-297	--	G		61	68	64	7	4	3	C (67)	None
Sources: I-15 CP Noise Study Report, July 2017; and I-15 CP Noise Abatement Decision Report, July 2017.											

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2.2.7.4 Avoidance, Minimization, and/or Abatement Measures

For modeled locations that were found to approach or exceed the representative NAC, TNM 2.5 was used to model noise barriers and determine the insertion loss (noise reduction) provided. For shoulder-adjacent or edge-of-shoulder walls, heights of eight to 14 feet were modeled. For shoulder-adjacent barriers, a 16-foot barrier height was not evaluated as 14 feet is the maximum height for edge-of-shoulder barriers, as recommended in Chapter 1100 of the Caltrans Highway Design Manual (Caltrans 2016). Barriers were analyzed to determine their ability to meet the feasibility requirement (ability to provide 5 dB insertion loss at modeled locations) and the reasonableness requirement (ability to provide 7 dB insertion loss [design goal] at one modeled location as well as meet the cost requirements [the reasonableness allowance being within a 10-percent contingency of the cost to construct the barrier]). One other factor is used to determine the reasonableness of a barrier; the viewpoint of the benefited receivers. Polling of the benefited receptors will occur during the environmental public review process and may result in a barrier not being reasonable if the benefited receptors vote against the abatement (51 percent of the owner/occupants voting against the proposed abatement).

At locations where existing noise barriers are present, if there are impacts, Caltrans guidance requires that each existing noise barrier be analyzed relative to the no-barrier condition at that location to determine the amount of insertion loss the existing barrier provides. If it is determined that the impacted receptor is already receiving a 5 dB insertion loss from the barrier (to meet the feasibility requirement) and that a minimum of one other non-impacted receptor in the area is receiving at least a 7 dB insertion loss (to meet the barrier design goal), the barrier is deemed to be acoustically feasible, and no further analysis would be necessary. If any of the existing barriers do not meet these requirements, additional barrier heights must be modeled to determine whether an increased barrier height could achieve the feasibility and design goal requirements. This guidance is based on the FHWA-HEP-12-051, Consideration of Existing Noise Barrier in a Type 1 Noise Analysis, guidance included as Appendix D4 in the July 2017 *Noise Study Report*.

Based on the studies completed to date, Caltrans considered the following noise abatement measures, and intends to incorporate noise abatement in the form of the noise barriers that were found to be both feasible and reasonable:

Area B (North of the SR-60/I-15 Interchange, South of the Jurupa Street Interchange)

Barrier S-2735

During the Design Year, modeled location M-9 is predicted to experience a noise level of 68 dBA $L_{eq}(h)$, which would approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category C land uses (Place of Worship). Therefore, a noise barrier (identified as Barrier S-2735 in **Figure 2-41**, Sheets 4 and 5) was evaluated. Barrier S-2735 was evaluated in two-foot increments from eight through 14 feet in height. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-2735 found that a barrier height of 14 feet would be feasible and met the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for the barrier height that is considered feasible and meet the design goal (14 feet) would be \$92,000. The current estimated construction cost for the only wall height which met the design goal (14 feet) would be \$1,011,200. Therefore, Barrier S-2735 was

found not to be reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-2735 as abatement as part of the project.

Barrier S-27

During the Design Year, modeled location M-11 is predicted to experience a noise level of 74 dBA $L_{eq}(h)$, which would approach or exceed the NAC of 67 dBA $L_{eq}(h)$ for Activity Category C land uses (Park). Therefore, a noise barrier (identified as Barrier S-27 in **Figure 2-41**, Sheet 5) was evaluated. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-27 found that a barrier height of 14 feet would be feasible and meet the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier height that are considered feasible and meet the design goal (14 feet) would be \$92,000. The current estimated construction cost for the only wall height that met the design goal (14 feet) would be \$849,100. Therefore, Barrier S-27 was found not to be reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-27 as abatement as part of the project.

Barrier S-42

During the Design Year, modeled location M-12 is predicted to experience a noise level of 76 dBA $L_{eq}(h)$, which would approach or exceed the NAC of 72 dBA $L_{eq}(h)$ for Activity Category E land uses (Outdoor Seating). Therefore, a noise barrier (identified as Barrier S-42 in **Figure 2-41**, Sheet 6) was evaluated. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-42 found that barrier heights of 12 and 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier heights that are considered feasible and meet the design goal (12 and 14 feet) would be \$92,000. The current estimated construction cost for the wall heights which met the design goal (12 and 14 feet) would be \$422,500 and \$466,800 respectively. Therefore, Barrier S-42 was found to be not reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-42 as abatement as part of the project.

Barrier S-70

During the Design Year, modeled location M-14 is predicted to experience a noise level of 72 dBA $L_{eq}(h)$, which would approach or exceed the NAC of 72 dBA $L_{eq}(h)$ for Activity Category E land uses (Outdoor Seating). Therefore, a noise barrier (identified as Barrier S-70 in **Figure 2-41**, Sheet 7) was evaluated. Modeled location M-16, which was not affected, was also included to determine if Barrier S-70 would benefit this receiver as well. The calculated noise reductions and reasonable allowances by barrier height are summarized in **Table 2-81**. The analysis of Barrier S-70 found that barrier heights of 12 and 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier heights that are considered feasible and meet the design goal (12 and 14 feet) would be \$92,000. The current estimated construction cost for the wall heights which met the design goal (12 and 14 feet) would be \$282,900 and \$310,700

respectively. Therefore, Barrier S-70 was found to be not reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-70 as abatement as part of the project.

Area C (North of Jurupa Street Interchange, South of the I-10/I-15 Interchange)

Barrier S-95

During the Design Year, modeled location M-18 is predicted to experience a noise level of 71 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category C land uses (Amusement Park). Two other modeled locations in this general area (M-18A [Amusement Park] and M-18B [Picnic Area]) are also predicted to approach or exceed the NAC of 67 dBA Leq(h) for Activity Category C land uses (71 and 70 dBA Leq(h), respectively). Therefore, a noise barrier (identified as Barrier S-95 in **Figure 2-41**, Sheets 7 and 8) was evaluated. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-95 found that heights of 12 and 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier heights that are considered feasible and meet the design goal (12 and 14 feet) would be \$736,000. The current estimated construction cost for the wall heights that met the design goal (12 and 14 feet) would be \$760,500 and \$838,300 respectively. The cost at both heights (12 and 14 feet) would exceed the reasonable allowance for both. However, the reasonable allowance (\$736,000) for the 12-foot barrier height is within 10% of the cost to construct (\$760,500). Therefore, Barrier S-95 is considered reasonable to construct and is recommended at a barrier height of 12 feet.

During the soundwall survey process, one response was received which represented all eight benefited receptors relating to Noise Barrier S-95. None of those responses were in support of the barrier; therefore, based on the Protocol, more than 50% of the respondents did not support the barrier. Based on studies completed to date, Barrier S-95 with a lengths and average heights of 1,770 feet and 12 feet would reduce noise levels by 6 to 7 dBA for eight equivalent dwelling units at a cost of \$760,500. Based on the results of the soundwall survey the benefitted receptors do not support the inclusion of the barrier; therefore, Caltrans does not intend to incorporate Barrier S-95 as part of the project.

Barrier S-119

During the Design Year, modeled location M-23 is predicted to experience a noise level of 71 dBA Leq(h), which would approach or exceed the NAC of 72 dBA Leq(h) for Activity Category E land uses (Outdoor Seating). Therefore, a noise barrier (identified as Barrier S-119 in **Figure 2-41**, Sheets 8 and 9) was evaluated. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-119 found that barrier heights of 12 and 14 feet would be feasible and meet the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier heights that are considered feasible and meet the design goal (12 and 14 feet) would be \$92,000. The current estimated construction cost for the wall heights that met the design goal (12 and 14 feet) would be \$497,600 and \$542,800 respectively. Therefore, Barrier S-119 was found to be not reasonable from a cost perspective.

Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-119 as abatement as part of the project.

Area E (North of Foothill Boulevard Interchange, South of the Baseline Road Interchange)

Barrier S-310

During the Design Year, modeled location M-45A is predicted to experience a noise level of 72 dBA Leq(h), which would approach or exceed the NAC of 72 dBA Leq(h) for Activity Category E land uses (outdoor seating). Therefore, a noise barrier (identified as Barrier S-310 in **Figure 2-41**, Sheet 15) was evaluated. Barrier S-310 would provide shielding for modeled location M-45A, representative of one receptor. One other modeled location (M-46) was included in the barrier analysis to determine if Barrier S-310 would provide a benefit at this location. Modeled location M-46 is representative of one receptor. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-310 found that barrier heights of 12 and 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

During the production of the July 2017 *Noise Study Report*, potential design changes to the physical alignment in the area of Barrier S-310 were identified to maintain consistency with the 2016 Highway Design Manual. Specifically, updates to the 2016 Highway Design Manual require a 300-foot acceleration lane along on-ramps. Should these design changes be necessary, the edge-of-shoulder alignment along the on-ramps may deviate from the current geometry where Barrier S-310 is located. If these design changes are implemented, a supplemental noise analysis would be conducted to analyze the noise effects of such design changes, and a Supplemental Noise Study Report would be included as an addendum to the July 2017 *Noise Study Report*.

The total reasonable allowance for barrier heights that are considered feasible and meet the design goal (12 and 14 feet) would be \$92,000. The current estimated construction cost for the wall heights which met the design goal (12 and 14 feet) would be \$679,400 and \$717,000 respectively. Therefore, Barrier S-310 was found to be not reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-310 as abatement as part of the project.

Barrier S-344

During the Design Year, modeled location M-64 is predicted to experience a noise level of 72 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category B land uses (residential). Therefore, a noise barrier (identified as Barrier S-344 in **Figure 2-41**, Sheets 15 through 18) was evaluated. Barrier S-344 would provide shielding for modeled location M-64, representative of one receptor, as well as modeled locations M-48 through M-63, M-65 through M-100, and M-110 through M-142. These modeled locations are representative of 180 additional receptors. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-344 found that barrier heights of 10 to 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

During the production of July 2017 *Noise Study Report*, potential design changes to the physical alignment in the area of Barrier S-344 were identified to maintain consistency with the 2016 Highway Design Manual. Specifically, updates to the 2016 Highway Design Manual require a 300-foot acceleration lane along on-ramps. Should these design changes be necessary, the edge-of-shoulder alignment along the on-ramps may deviate from the current geometry where Barrier S-344 is located. Due to these design changes an additional analysis was prepared as an addendum to the NSR which analyzed the effects of the design change on the design year sound level results presented in the NSR. This addendum is included in the appendices to the NSR.

Based on December 16, 2016 updates to the Highway Design Manual (HDM), the metered entrance ramp to the freeway should include a minimum length of 300 feet of auxiliary lane beyond the ramp convergence point (the point of convergence occurs where the right Edge of Travel Way (ETW) of the entrance ramp is one lane width from the right ETW of the freeway). Appendix A of the Addendum to the NSR shows the HDM Index 504.3(2)(a) and Figure 504.3A, which direct the design change to include a 300-foot auxiliary lane with the metered entrance ramp (Caltrans 2017a). Based on modeling of the updated HDM design changes at the Foothill Boulevard NB on-ramps, 43 modeled receivers (41 of which were considered noise-sensitive [land use activity category B or C]) would be affected by the design changes. **Table 2-83** below summarizes the results of the additional analysis conducted to identify changes to modeled noise levels that would occur as a result of the design changes.

Table 2-83. Comparison of Traffic Noise Impacts

Receiver	Measurement Location	Design-Year Build Conditions (i.e., Future With-Project)		
		Results from Approved NSR Leq(h) (dBA)	Results with HDM Changes Leq(h) (dBA)	Change (dB)
M-51	--	61	60	-1
M-52	--	68	67	-1
M-53	--	70	68	-2
M-54	--	70	69	-1
M-55	--	68	68	--
M-56	--	56	55	-1
M-57	--	69	68	-1
M-58	--	66	65	-1
M-59	--	69	68	-1
M-60	--	66	65	-1
M-61	--	56	56	--
M-62	ST-23	68	68	--
M-62A	--	70	70	--
M-63	--	68	66	-2
M-64	--	72	70	-2
M-65	--	70	68	-2
M-66	--	75	73	-2
M-67	--	69	66	-3
M-68	--	73	71	-2
M-69	--	67	65	-2
M-70	--	70	67	-3
M-71	--	73	71	-2

Table 2-83. Comparison of Traffic Noise Impacts (continued)

Receiver	Measurement Location	Design-Year Build Conditions (i.e., Future With-Project)		
		Results from Approved NSR Leq(h) (dBA)	Results with HDM Changes Leq(h) (dBA)	Change (dB)
M-72	--	69	67	-2
M-73	--	71	69	-2
M-74	--	68	67	-1
M-75	--	71	70	-1
M-76	--	66	64	-2
M-77	--	69	67	-2
M-78	--	63	61	-2
M-79	--	56	56	--
M-80	--	56	56	--
M-81	--	68	67	-1
M-82	--	67	66	-1
M-83	--	67	67	--
M-84	--	63	63	--
M-85	ST-22	59	58	-1
M-86	--	59	59	--
M-87	--	57	57	--
M-88	--	67	67	--
M-89	--	64	64	--
M-90	--	68	68	--
M-91	--	61	61	--
M-92	--	64	64	--

Source: Caltrans 2017c

Modeled receivers that were identified as impacts in the NSR are **bolded** in the third column. Of the 43 noise-sensitive receivers, 25 were found to have impacts (approach or exceed the Noise Abatement Criteria [NAC] of 67 dBA $L_{eq}[h]$). Results of the analysis predict that noise levels would change from 0 to -3 (i.e., a 3 decibel [dB] decrease) from the modeled results included in the 2017 NSR. Additionally, three modeled receivers (M-58, M-60, and M-76) would no longer be impacted (approach or exceed the NAC for Activity Category B or C land uses). All these modeled receivers are included in the analysis of Noise Barrier S-344 which is discussed in detail below.

Noise Barrier S-344 as analyzed in the 2017 NSR would provide benefit for 65 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 10 feet, 101 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 12 feet, and 137 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 14 feet and have total reasonable allowances of \$5,980,000, \$9,292,000, and \$12,604,000, respectively. The construction costs for each barrier height would be \$2,589,900 at 10 feet, \$2,856,000 at 12 feet, and \$3,117,200 at 14 feet. The reasonable allowance for a barrier height of 14 feet (\$12,604,000) reflects the highest number of benefited receptors and exceeds the construction cost (\$3,243,100).

Based on the addendum to the NSR (discussed above) the barrier design for Barrier S-344 was modified to follow the new edge of shoulder based on the new design requirements from the HDM, and the barrier was remodeled at its design height (14 feet). Of the 43 receivers modeled for the new barrier design, 39 receivers received benefit at the design height (14 feet).

Comparison of the modeling results for the new S-344 barrier design to the results included in the approved NSR showed that the new barrier design would benefit the same modeled receivers in the NSR (39 modeled receivers).

Additionally, based on public comments received during the comment period, additional analysis of Barrier S-344 was conducted to evaluate if lengthening the barrier would provide benefit to receiver M-45 which was representative of the Sacred Heart Parish School. Subsequent to the modeling effort for the project and during the comment period for the ED, it was revealed that the school had undergone recent construction that moved the school playground approximately 230 feet closer to the I-15 alignment. Receiver M-45 included in **Figure 2-41** sheet 16 above is acoustically equivalent to the location of the new playground.

To address the school representative's comment and determine if Barrier S-344 could be extended to provide benefit to the new school design, Barrier S-344 was extended to the south along the Foothill Boulevard on-ramp from the barrier southern terminus (station 316+00 identified in the NSR) down to station 311+07. Also, to shield the school playground from the I-15 mainline, an additional barrier segment was modeled along the I-15 mainline lanes starting at station 307+77 through station 314+00. These barriers were analyzed to determine the S-344 barrier extension that would be feasible for the school.

Based on the addendum to the NSR the addition of a 14-foot-high barrier extending from station 307+77 to station 314+00 along the I-15 mainline and an additional barrier extending from station 311+07 up to station 316+00 would provide 7 dB worth of insertion loss and would meet the feasibility requirement and the design goal at modeled receiver M-45. The addition of the benefited receptor (M-45) would add an additional \$92,000 to the 14-foot barrier reasonable allowance, for a total of 138 benefited receivers (137 benefited receivers were identified in the approved NSR) and a total reasonable allowance of \$12,696,000.

Based on the addendum to the NSR the addition of the barrier extension, as discussed above, would increase the cost of Barrier S-344 from \$3,117,200 (included in the approved NADR) up to \$3,416,500 (see Appendix A of the addendum to the NADR for updated costs table). **Table 2-84** shows the summarized changes to Barrier S-344 based on the updated modeling included in the Addendum to the NSR and NADR.

Table 2-84. Comparison of Noise Barrier S-344 and the Barrier S-344 Extension

Barrier ID	Barrier Length in the Approved NSR (Ft)	Extended Barrier Length (Ft)	Barrier Height (Ft)	Number of Benefited Receptors in the Approved NSR	Number of Benefited Receptors with Additional Barrier	Reasonableness Allowance in the Approved NSR	Reasonableness Allowance with Additional Barrier	Estimated Construction Cost in the Approved NADR	Estimated Construction Cost in the Approved NADR
S-344	5,350	6,480	14	137	138	\$12,604,000	\$12,696,000	\$3,117,200	\$3,416,500

During the soundwall survey process, a total of 61 responses were received relating to Noise Barrier S-344.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-344 located along the edge of shoulder, with respective lengths and average heights of 6,480 feet and 14 feet. Calculations based on preliminary design data show that the barrier will reduce noise levels by 5 to 10 dBA for 138 residences at a cost of \$3,416,500. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

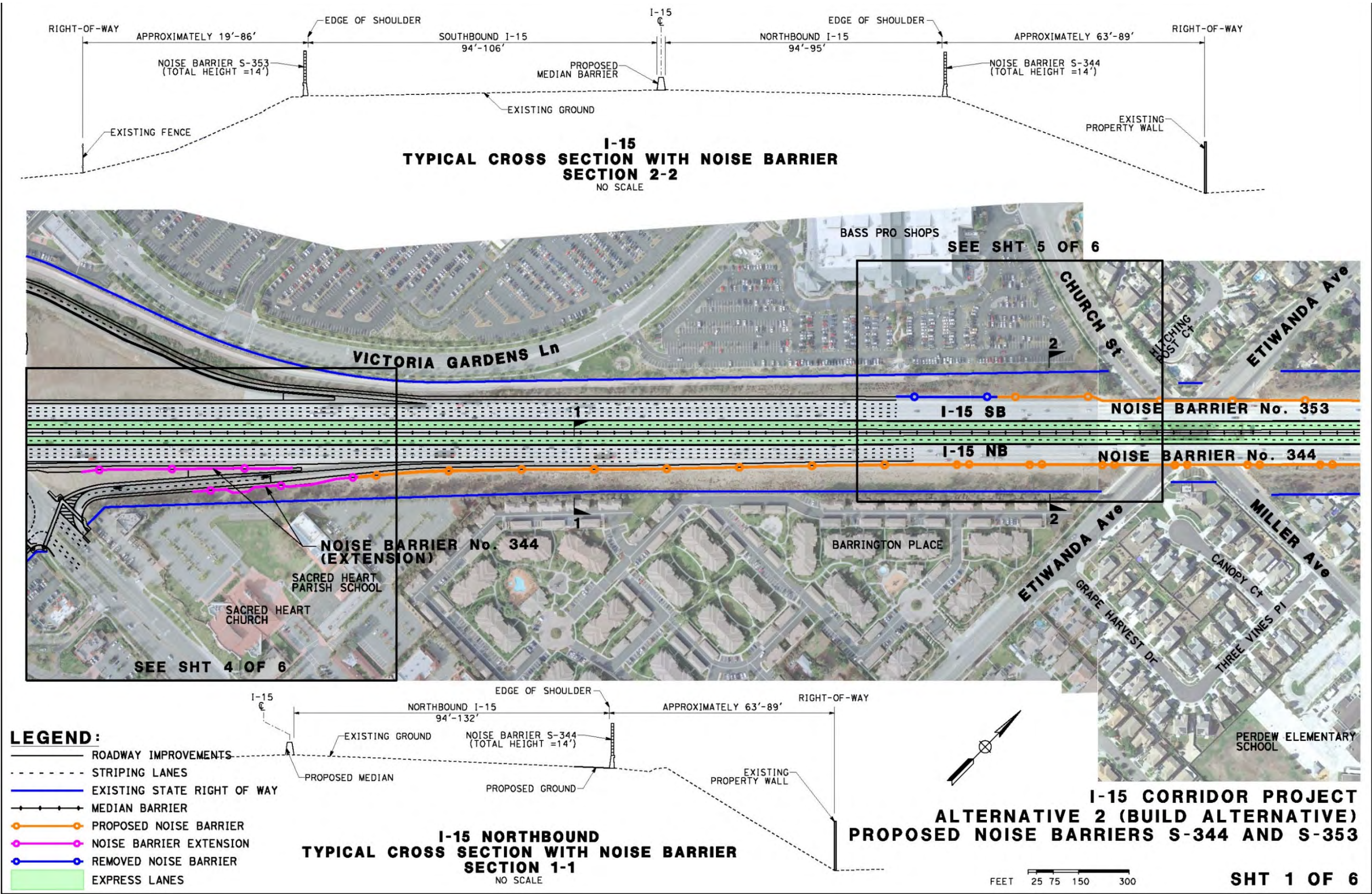
Barrier S-353

During the Design Year, modeled location M-155 is predicted to experience a noise level of 74 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category B land uses (residential). Therefore, a noise barrier (identified as Barrier S-353 in **Figure 2-41**, Sheets 16 through 18) was evaluated. Barrier S-353, would provide shielding for modeled location M-155, representative of one receptor, as well as modeled locations M-62A, M-101 through M-109, and M-144 through M-161. These modeled locations are representative of 57 additional receptors. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-353 found that barrier heights of 10 to 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

Noise Barrier S-353 would provide benefit for seven benefited receptors (Activity Category B land uses [residential]) at a barrier height of 10 feet, 24 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 12 feet, and 38 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 14 feet and have total reasonable allowances of \$644,000, \$2,208,000, and \$3,496,000, respectively. The construction costs for each barrier height would be \$2,001,300 at 10 feet, \$2,200,900 at 12 feet, and \$2,396,300 at 14 feet. The reasonable allowance for a barrier height of 14 feet (\$3,496,000) reflects the highest number of benefited receptors and exceeds the construction cost (\$2,396,300).

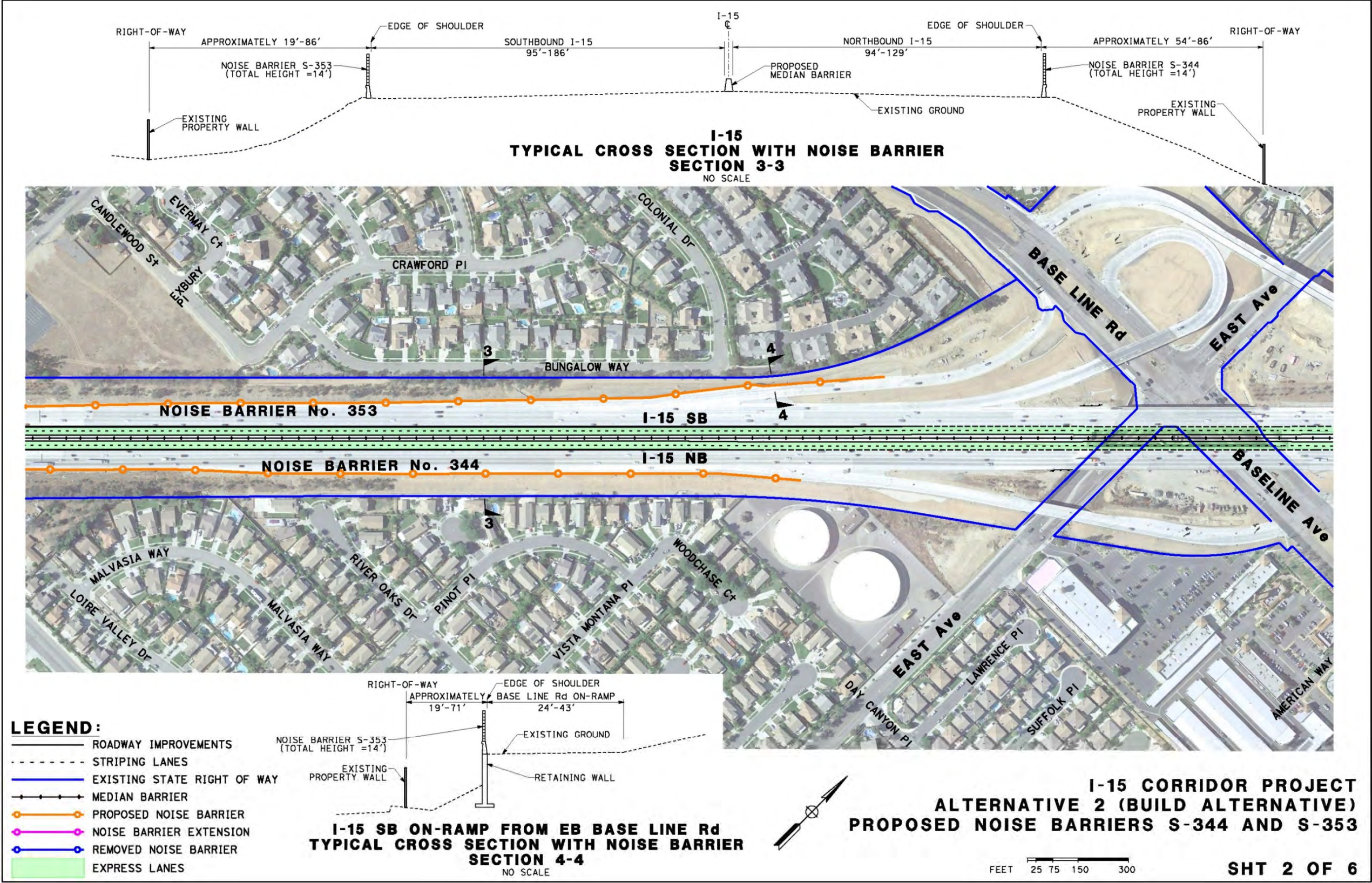
During the public comment period, comments were received from the City of Rancho Cucamonga, which requested that Barrier S-353 be shortened to maintain as much visibility for the Bass Pro Shop from the I-15 Corridor as possible. Additional modeling was conducted and is included in the Addendum to the NSR and NADR to determine whether Barrier S-353 could be shortened in a way that would not reduce the number of benefitted residential receivers identified in the NSR. The additional noise modeling showed that Barrier S-353 could be shortened 300 feet from its southern terminus at station 332+00 (identified in the project NSR) to station 335+00. The reduced barrier design is shown in **Figure 2-50** and **Table 2-85** shows the results of the additional analysis compared to the results presented in the NSR. **Table 2-86** summarizes the changes to the barrier, the reasonable allowance and the cost to construct the barrier.

Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 1



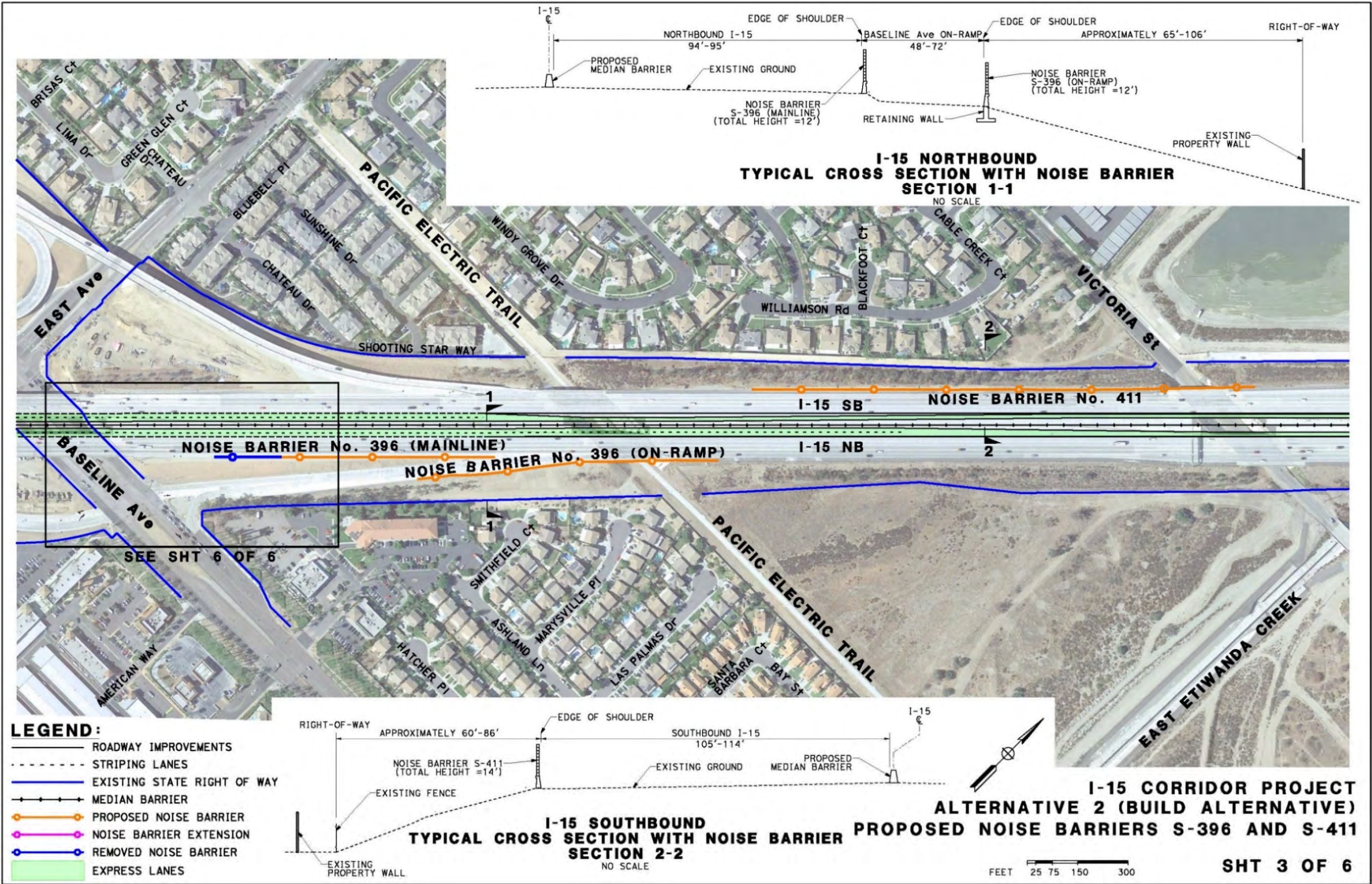
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Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 2



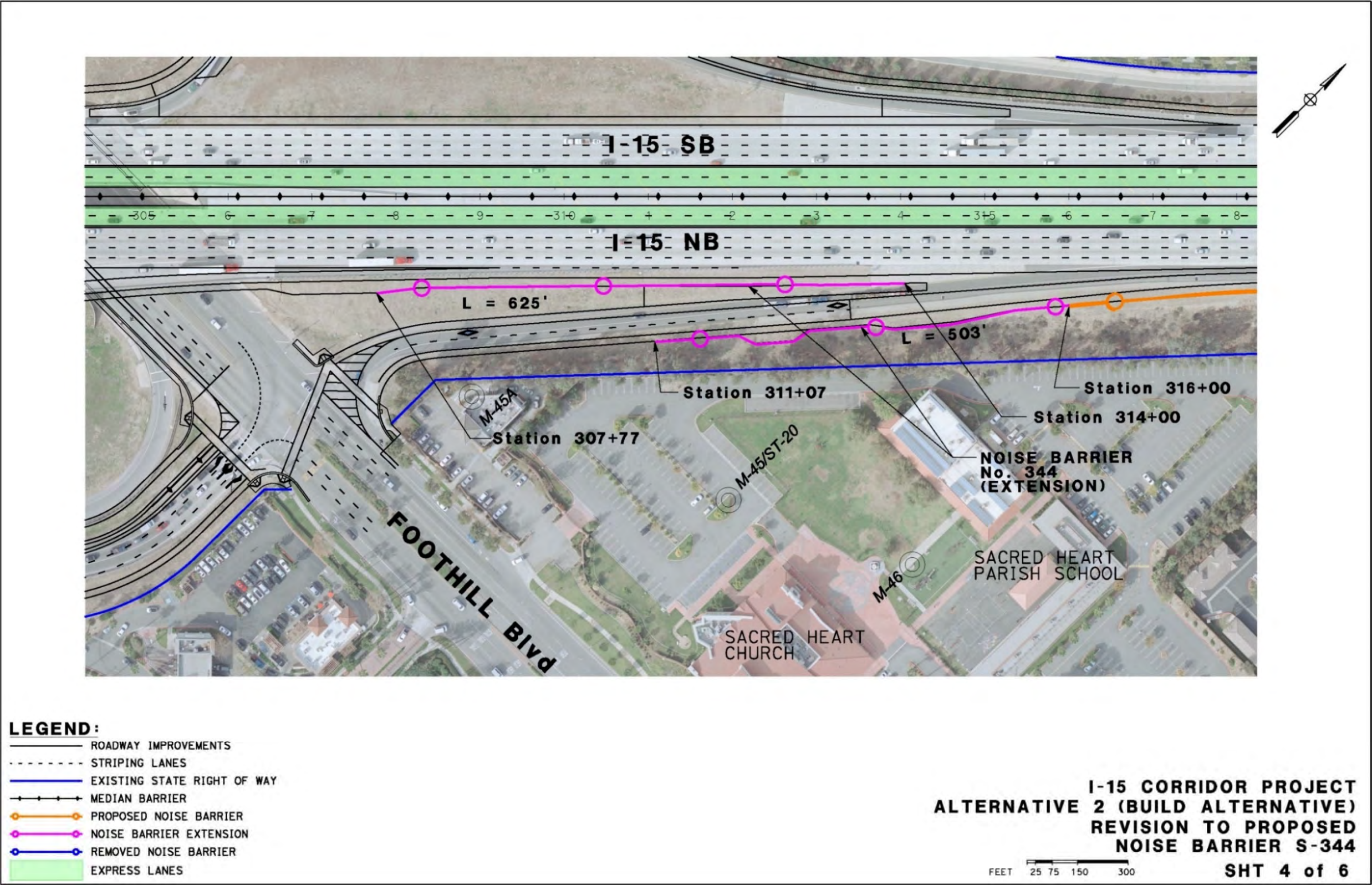
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Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 3



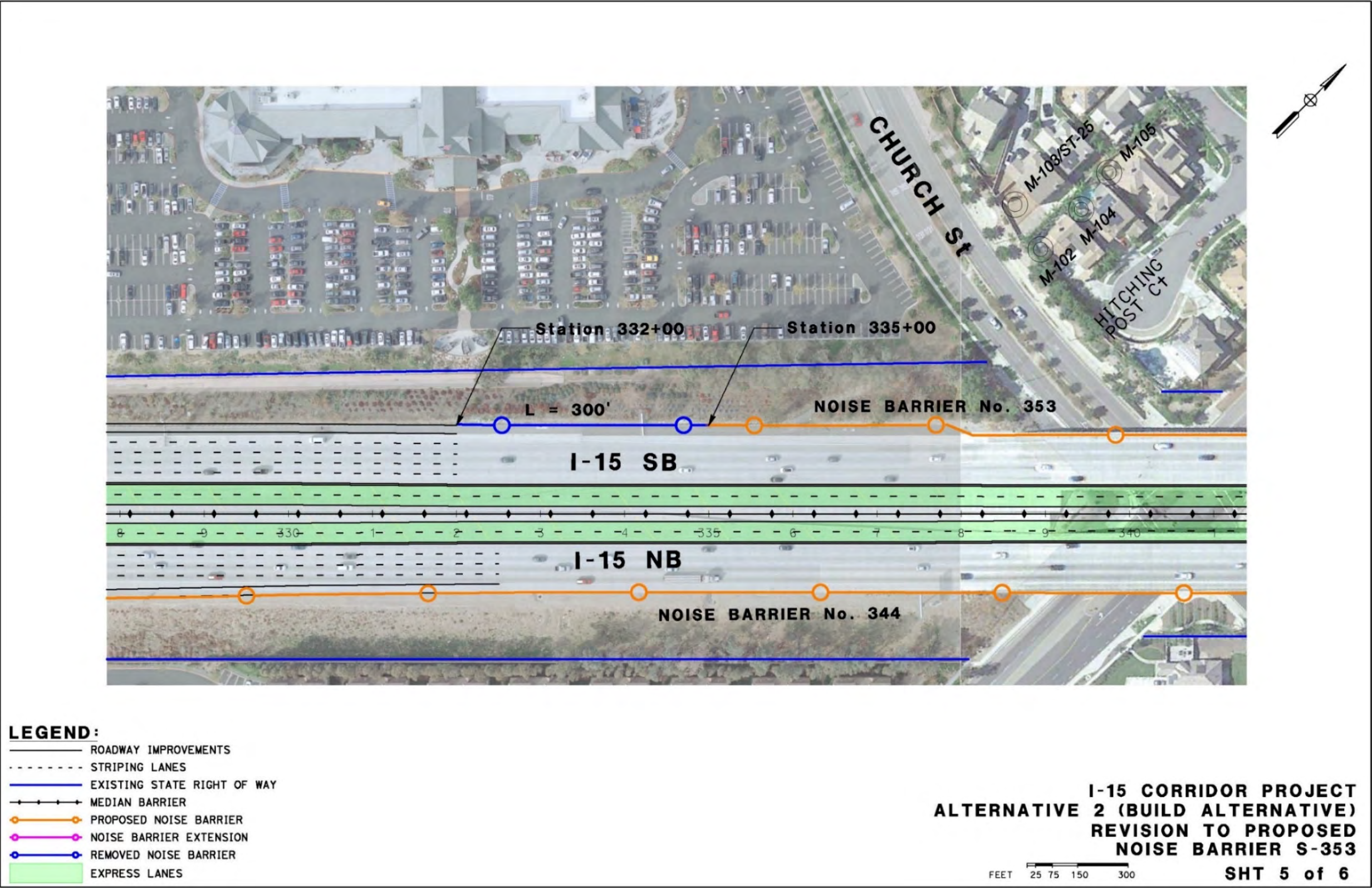
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Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 4



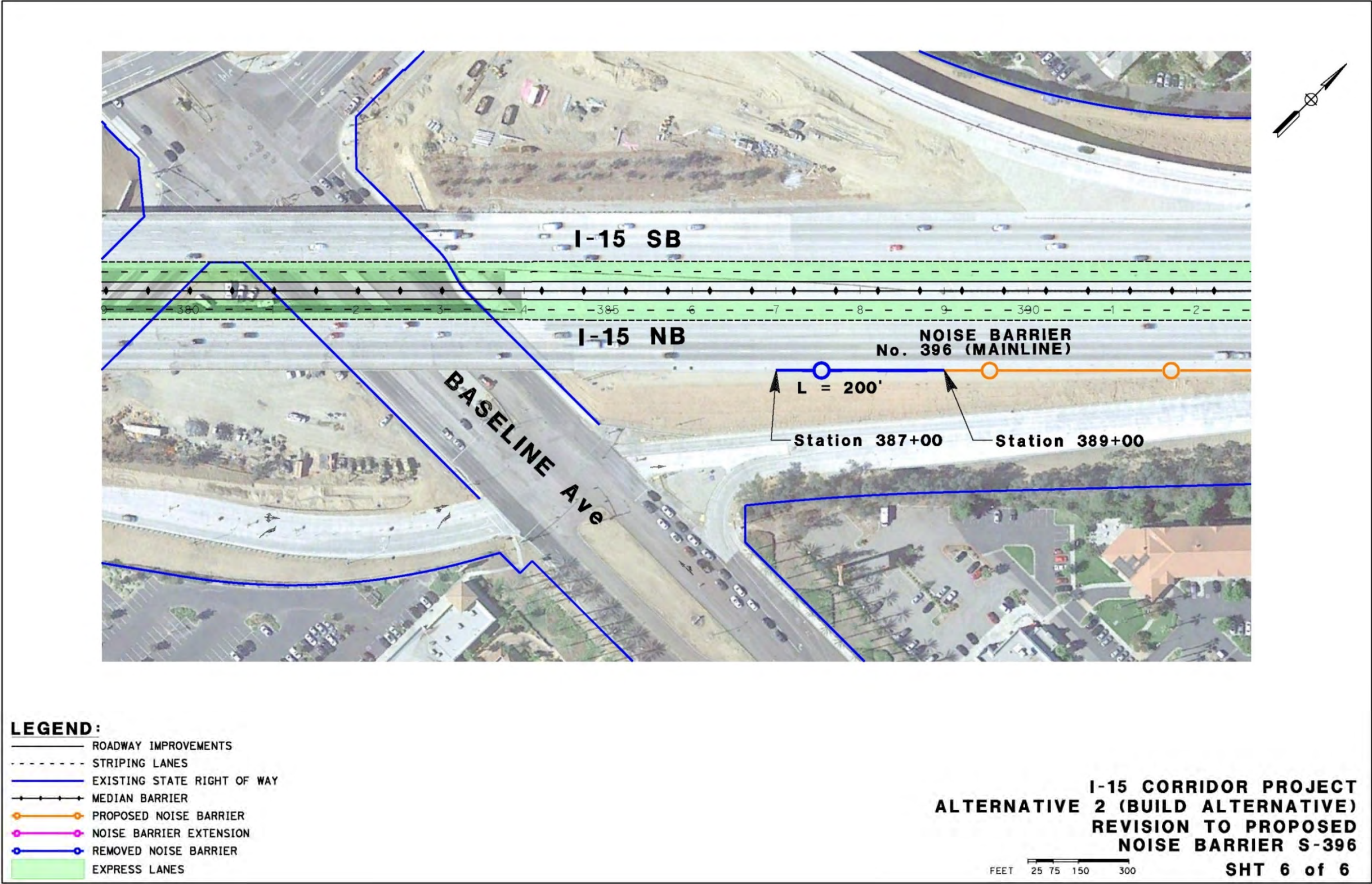
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Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 5



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Figure 2-50. Revised Noise Barriers S-344 and S-353
Sheet 6



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Table 2-85. Comparison of Noise Barrier S-353 and the Barrier S-353 Reduction

Receiver	Land Use/ Activity Category	Design Year Build Condition Results Leq(h), dBA	Absolute Noise Level from 14-Foot Barrier Modeled in the ED/Insertion Loss Leq(h), dBA	Absolute Noise Level from 14-Foot Barrier Modeled with Reduced Design/Insertion Loss Leq(h), dBA	Change (dB)
M-101	Residential / B	72	69/3	69/3	0
M-102	Residential / B	71	66/5	66/5	0
M-103	Residential / B	70	63/7	64/6	+1
M-104	Residential / B	60	59/1	59/1	0
M-105	Residential / B	62	58/4	59/1	+1
M-106	Residential / B	68	64/4	64/4	0
M-107	Residential / B	62	58/4	59/3	+1

Modeled receivers which approach or exceed the NAC are bolded.

Table 2-86. Comparison of Noise Barrier S-353 and the Reduced Barrier S-353

Barrier ID	Barrier Length in the Approved NSR (Ft)	Extended Barrier Length (Ft)	Barrier Height (Ft)	Number of Benefited Receptors in the Approved NSR	Number of Benefited Receptors with Additional Barrier	Reasonableness Allowance in the Approved NSR	Reasonableness Allowance with Additional Barrier	Estimated Construction Cost in the Approved NADR	Estimated Construction Cost in the Approved NADR
S-353	4,000	3,700	14	38	38	\$3,496,000	\$3,496,000	\$2,396,300	\$2,256,300

The shortening of Barrier S-353, as discussed above, would reduce the cost of this barrier from \$2,396,300 to \$2,256,300. Therefore, the barrier would still be considered reasonable from a cost perspective. During the soundwall survey process, a total of 20 responses were received relating to Noise Barrier S-353.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-353 located along the edge of shoulder with respective length and average height of 3,700 feet and 14 feet. Calculations based on preliminary design data show that the barrier would reduce noise levels by 5 to 11 dBA for 38 residences at a cost of \$2,256,300. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

*Area F (North of Baseline Road Interchange, South of the SR-210/I-15 Interchange)***Barrier S-396**

During the Design Year, modeled location M-228 is predicted to experience a noise level of 66 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category B land uses (residential). Therefore, a noise barrier (identified as Barrier S-396 in **Figure 2-41**, Sheets 18 through 19) was evaluated. Barrier S-396 would provide shielding for modeled location M-228, representative of one receptor, as well as modeled locations M-223 through M-227, M-229 and M-230, and M-232 through M-234. These modeled locations are representative of 10 additional receptors. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-396 found that barrier heights of 10 to 14 feet would be feasible and would meet the design goal (i.e., 7 dB insertion loss).

Noise Barrier S-396 would provide benefit for nine benefited receptors (Activity Category B land uses [residential]) at a barrier height of 10 feet, 10 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 12 feet, and 10 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 14 feet and have total reasonable allowances of \$828,000, \$920,000, and \$920,000, respectively. The construction costs for each barrier height would be \$901,600 at 10 feet, \$990,700 at 12 feet, and \$1,090,000 at 14 feet. The reasonable allowance is within the 10-percent contingency of the cost to construct at barrier heights of 10 feet (\$828,000 vs \$901,600) and 12 feet (\$920,000 vs \$990,700). Therefore, Barrier S-396 is considered reasonable to construct and is recommended at a barrier height of 12 feet, which benefits the most receptors.

During the public comment period, comments were received from the Starbucks which is represented by modeled location M-223, which requested that Barrier S-396 be shortened to maintain as much visibility from the I-15 Corridor as possible. Additional modeling was conducted and is included in the Addendum to the NSR and NADR to determine whether Barrier S-396 could be shortened in a way that would not result in a change in the effectiveness of Barrier S-396 for the residential receivers represented by modeled receivers M-225 through M-234 identified in the NSR. The additional noise modeling showed that Barrier S-396 could be shortened 200 feet along the I-15 mainline north of the Baseline Avenue overcrossing from its southern terminus at station 387+00 (identified in the project ED) to station 389+00. The reduced barrier design is shown in **Figure 2-50** and **Table 2-87** shows the results of the additional analysis compared to the results presented in the NSR. **Table 2-88** summarizes the changes to the barrier, the reasonable allowance and the cost to construct the barrier.

Table 2-87. Comparison of Noise Barrier S-396 and the Barrier S-396 Reduction

Receiver	Land Use/ Activity Category	Design Year Build Condition Results Leq(h), dBA	Absolute Noise Level from 12-Foot Barrier Modeled in the ED/Insertion Loss Leq(h), dBA	Absolute Noise Level from 12-Foot Barrier Modeled with Reduced Design/Insertion Loss Leq(h), dBA	Change (dB)
M-223	Restaurant / E	66	61/5	62/4	+1
M-224	Hotel / E	67	63/4	64/3	+1
M-225	Residential / B	66	59/7	59/7	0
M-226	Residential / B	65	59/6	59/6	0
M-227	Residential / B	64	58/6	58/6	0
M-228	Residential / B	66	59/7	59/7	0
M-229	Residential / B	65	59/6	59/6	0
M-230	Residential / B	66	58/8	58/8	0
M-232	Residential / B	61	56/5	56/5	0
M-233	Residential / B	63	58/5	58/5	0
M-234	Residential / B	64	59/5	59/5	0
Modeled receivers which approach or exceed the NAC are bolded.					

Table 2-88. Comparison of Noise Barrier S-396 and the Reduced Barrier S-396

Barrier ID	Barrier Length in the Approved NSR (Ft)	Extended Barrier Length (Ft)	Barrier Height (Ft)	Number of Benefited Receptors in the Approved NSR	Number of Benefited Receptors with Additional Barrier	Reasona- bleness Allowance in the Approved NSR	Reasona- bleness Allowance with Additional Barrier	Estimated Construction Cost in the Approved NADR	Estimated Construction Cost Estimated Construction Cost in the Approved NADR
S-396	1,735	1,535	12	10	9	\$920,000	\$828,000	\$990,700	\$907,200

The reduction of length for Barrier S-396, as discussed above, would decrease the cost of the barrier from \$990,700 to \$907,200 (see Appendix A for construction cost details). With the reduction in benefited receptors the new reasonableness allowance (\$828,000) would still be within 10 percent of the construction cost (\$907,200). Therefore, the revised noise barrier is still considered reasonable from a cost perspective.

During the soundwall survey process, a total of three responses were received relating to Noise Barrier S-396. Of those responses two were in support of the barrier and one was against.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-396 located along the edge of shoulder with respective length and average height of 1,535 feet and 12 feet. Calculations based on preliminary design data show that the barrier would reduce noise levels by 5 to 8 dBA for 9 residences at a cost of \$907,200. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

Barrier S-411

During the Design Year, modeled location M-221 is predicted to experience a noise level of 70 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category B land uses. Therefore, a noise barrier (identified as Barrier S-411 in **Figure 2-41**, Sheets 19 and 20) was evaluated. Barrier S-411, would provide shielding for modeled location M-221, representative of one receptor, as well as modeled locations M-208 through M-220 and M-236. These modeled locations are representative of 20 additional receptors. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-411 found that barrier heights of 12 to 14 feet would be feasible; although not meeting the design goal (i.e., 7 dB insertion loss), a different receiver (modeled locations M-216 and M-217) did achieve the design goal.

Noise Barrier S-411 would provide benefit for seven benefited receptors (Activity Category B land uses [residential]) at a barrier height of 12 feet, and 11 benefited receptors (Activity Category B land uses [residential]) at a barrier height of 14 feet and have total reasonable allowances of \$644,000 and \$1,012,000, respectively. The construction costs for each barrier height would be \$857,600 at 12 feet and \$924,000 at 14 feet. The reasonable allowance for a barrier height of 14 feet (\$1,012,000) reflects the highest number of benefited receptors and exceeds the construction cost (\$924,000). Therefore, Barrier S-411 is considered reasonable to construct and is recommended at a barrier height of 14 feet, which benefits the most receptors.

During the soundwall survey process, a total of seven responses were received relating to Noise Barrier S-411. All of those responses were in support of the barrier.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-411 located along the edge of shoulder with a receptive length and height of 1,500 feet and 14 feet. Calculations based on preliminary design data show that the barrier would reduce noise levels by 5 to 7 dBA for 11 residences at a cost of \$924,000. These measures may change based on input received from the public. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

Area G (North of the SR-210/I-15 Interchange to the Project Terminus, North of Duncan Canyon Road)

Barrier S-492

During the Design Year, modeled location M-244 is predicted to experience a noise level of 66 dBA Leq(h), which would approach or exceed the NAC of 67 dBA Leq(h) for Activity Category C land uses (church). Therefore, a noise barrier (identified as Barrier S-492 in **Figure 2-41**, Sheet 23) was evaluated. Barrier heights evaluated ranged from eight to 14 feet, in two-foot increments. The calculated noise reductions and reasonable allowances are summarized in **Table 2-81** by barrier height. The analysis of Barrier S-492 found that barrier heights of 12 to 14 feet would be feasible and capable of meeting the design goal (i.e., 7 dB insertion loss).

The total reasonable allowance for barrier height that are considered feasible and meet the design goal (14 feet) would be \$92,000. The construction costs for each barrier height would be \$750,800 at 12 feet and at \$814,300 at 14 feet. Therefore, Barrier S-492 was found to be not

reasonable from a cost perspective. Based on studies completed to date, Caltrans does not intend to incorporate Barrier S-492 as abatement as part of the project.

If during final design conditions have substantially changed, noise abatement may not be necessary. Should changes occur to the design of the project during the Design-Build phase of the project, which could potentially affect the performance of the soundwalls identified in this Environmental Document, which are planned to be constructed prior to commencement of heavy civil and structural work on the freeway between the Foothill Boulevard Undercrossing and the Victoria Street Undercrossing, a revalidation process would be completed first, which would include, as applicable, based on the extent of changes to the design of the project, additional noise analysis in the form of a supplemental Noise Study Report (NSR) and Noise Abatement Decision Report, and follow-up soundwall surveys to determine if the benefitted receptors supported the soundwalls, as identified in the supplemental NSR.

To minimize potential noise effects associated with construction of the project, the following minimization measure will be implemented.

NOI-1: The Design-Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior to the construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.

2.3 Biological Environment

2.3.1 Natural Communities

2.3.1.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

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 (Section 2.3.5). Wetlands and other waters are also discussed below in the Wetlands and Other Waters section (Section 2.3.2).

2.3.1.2 Affected Environment

The primary source used in the preparation of this section is the January 2018 *Natural Environment Study Report*.

Vegetation community mapping and assessments of potential wildlife corridors were performed in January and February 2016. To identify and determine direct, indirect, and cumulative impacts on sensitive biological resources within, and adjacent to, the project, a Biological Study Area (BSA) was established from the edge of proposed permanent disturbance limits determined from preliminary engineering design. Buffers are used to provide context for the resources identified within the BSA, address potential indirect effects, and allow revisions to the project while maintaining an adequate representation of the biological resources present. A 300-foot buffer from the limits of disturbance was used for vegetation mapping of natural communities and the wildlife corridors evaluation.

The BSA is composed primarily of developed and disturbed areas associated with the existing state right of way and public utilities, and to a lesser extent, disturbed and developed open areas generally limited to the northern portion of the BSA. Land use within the BSA currently includes dense residential and commercial development, disturbed open areas, agriculture, and public infrastructure.

Vegetation Communities

Seventeen vegetation communities/land use types were identified in the BSA, five of which are depleted natural communities or habitats of concern according to CDFW, i.e., Chamise Chaparral, California Sagebrush-California Buckwheat Scrub, Arroyo Willow Thicket, Cattail Marsh, Mulefat Thicket. The majority of natural communities occur within the northern portion of the BSA, with smaller remnant disturbed patches scattered throughout the BSA. Each vegetation community is listed in **Table 2-89** and described below (refer to **Figure 2-51** for an illustration of the vegetation community locations in the BSA).

2.3 Biological Environment

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Table 2-89. Biological Study Area and Limits of Disturbance Acreages by Vegetation Community

Vegetation Communities	Biological Study Area	Limits of Disturbance (acres)
California Buckwheat Scrub	1.75	1.59
California Buckwheat Scrub, Disturbed	6.76	6.61
California Sagebrush-California Buckwheat Scrub	21.58	8.70
California Sagebrush-California Buckwheat Scrub, Disturbed	21.49	14.45
Cattail Marsh	4.08	0.00
Mulefat Thicket	0.05	0.00
Open Water	4.57	0.00
Arroyo Willow Thicket	1.61	0.30
Chamise Chaparral	19.90	0.00
Chamise Chaparral, Disturbed	24.40	0.44
Agriculture	45.39	0.00
Developed	1,116.82	447.73
Disturbed	144.57	63.30
Non-Native Grassland	27.89	0.25
Ornamental/Landscape	179.19	58.53
Landscape Coast Live Oak Trees	6.72	5.68
Ruderal	420.11	176.60
Grand Total	2,046.88	784.18
Note: Acreage totals may be off by up to 0.01 acre due to rounding error.		

California Buckwheat Scrub/Disturbed California Buckwheat Scrub

Areas mapped as California Buckwheat Scrub are dominated by California buckwheat (*Eriogonum fasciculatum*). In some areas, there is a low cover of California sagebrush (*Artemisia californica*). Common native annuals observed in association with California Buckwheat Scrub areas include common fiddleneck (*Amsinckia menziesii*), suncups (*Camissoniopsis bistorta*), caterpillar phacelia (*Phacelia cicutaria*), and common eucrypta (*Eucrypta chrysanthemifolia*). Common non-native annuals observed in association with California Buckwheat Scrub include cheeseweed (*Malva parviflora*), red-stemmed filaree (*Erodium cicutarium*), long-beaked filaree (*Erodium botrys*), and non-native grasses such as Mediterranean schismus (*Schismus barbatus*), red brome (*Bromus madritensis*), and wild oats (*Avena* sp.). Areas mapped as Disturbed California Buckwheat Scrub are dominated by California buckwheat, but have a higher diversity and cover of non-native annual forbs and grasses compared to California Buckwheat Scrub.

California Sagebrush-California Buckwheat Scrub/ Disturbed California Sagebrush-California Buckwheat Scrub

Areas mapped as California Sagebrush-California Buckwheat Scrub are dominated by a mixed scrub community that includes California sagebrush and California buckwheat as dominant species. Additional plants observed include deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). Common native annuals observed in association with California Sagebrush-California Buckwheat Scrub include small primrose (*Camissoniopsis micrantha*), common fiddleneck, suncups, caterpillar phacelia, and common eucrypta. Common

non-native annuals observed in association with this community include earless crown-beard (*Verbesina encelioides*), cheeseweed, red-stemmed filaree, long-beaked filaree, and non-native grasses such as Mediterranean schismus, red brome, and wild oats. Areas mapped as Disturbed California Sagebrush-California Buckwheat Scrub are dominated by species found in the California Sagebrush-California Buckwheat Scrub community, but have lower diversity and cover of native shrubs and a higher diversity and cover of non-native annual forbs and grasses compared to California Sagebrush-California Buckwheat Scrub. This community is considered a sensitive vegetation community.

Cattail Marsh

Cattail Marsh occurs mostly in low-lying storm drainage features and is dominated or co-dominated by narrowleaf cattail (*Typha angustifolia*), broadleaf cattail (*Typha latifolia*), and southern cattail (*Typha domingensis*) along with other hydrophytic vegetation, such as sedges (*Carex* spp., *Cyperus* spp.) and rushes (*Juncus* spp.). In the BSA, this vegetation community is limited to a single location in a detention basin along the east side of the I-15 just south of Jurupa Street.

Mulefat Thicket

Mulefat Thicket is a riparian/upland shrubland dominated by mulefat (*Baccharis salicifolia*) with a continuous canopy layer and sparse understory. Within the BSA, this vegetation type is limited to a single isolated patch surrounded by Disturbed California Sagebrush-California Buckwheat Scrub and Ornamental/Landscape along the east side of the I-15 just north of Arrow Route. It was dominated by continuous, nearly monotypic stands of mulefat with occasional arroyo willow (*Salix lasiolepis*) saplings intermixed.

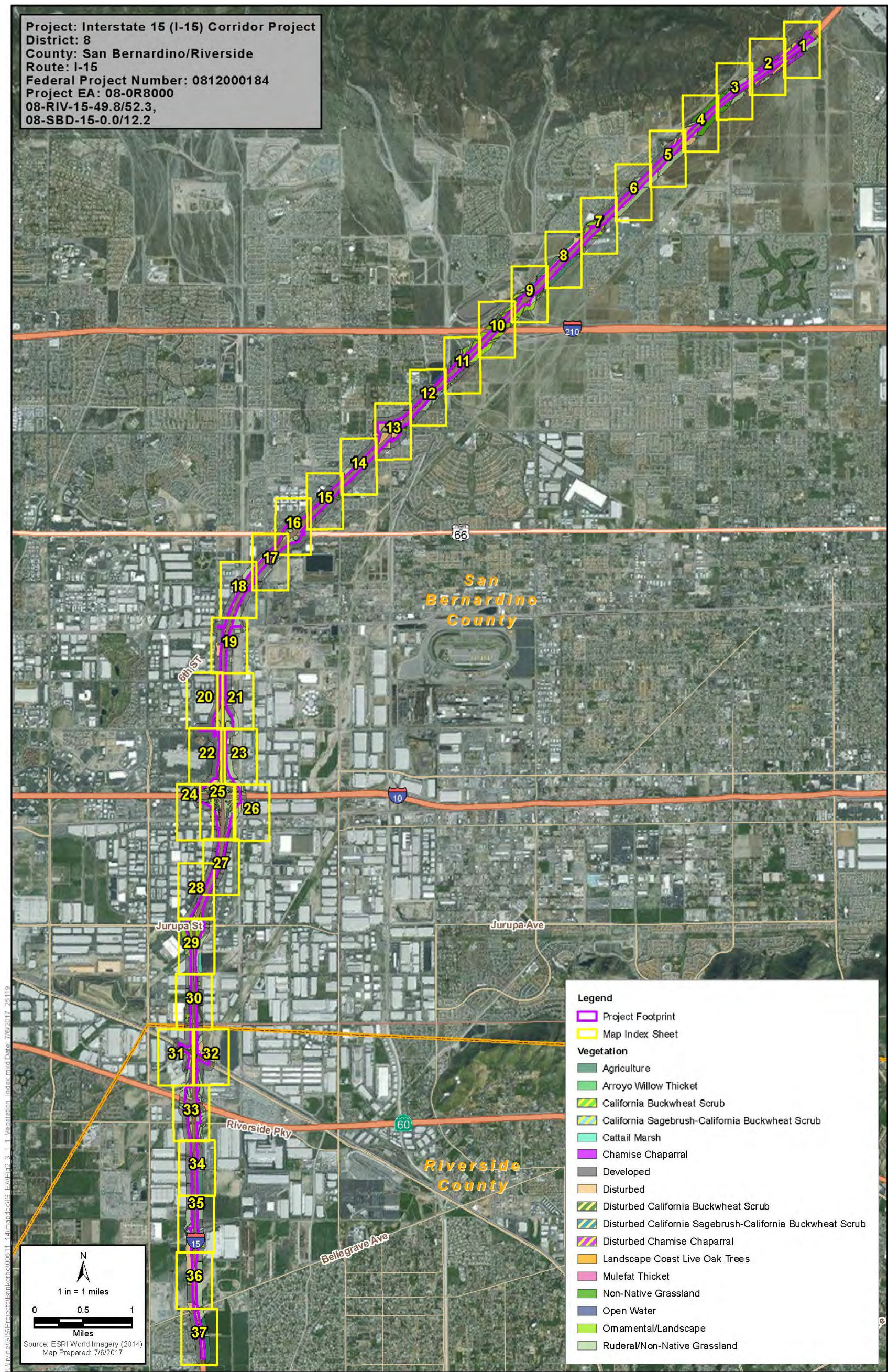
Open Water

Areas mapped as Open Water are more or less perennial waters associated with the Victoria Basin and the San Sevaine Basins located on the western side of I-15, as well as Day Creek Basin to the east.

Arroyo Willow Thicket

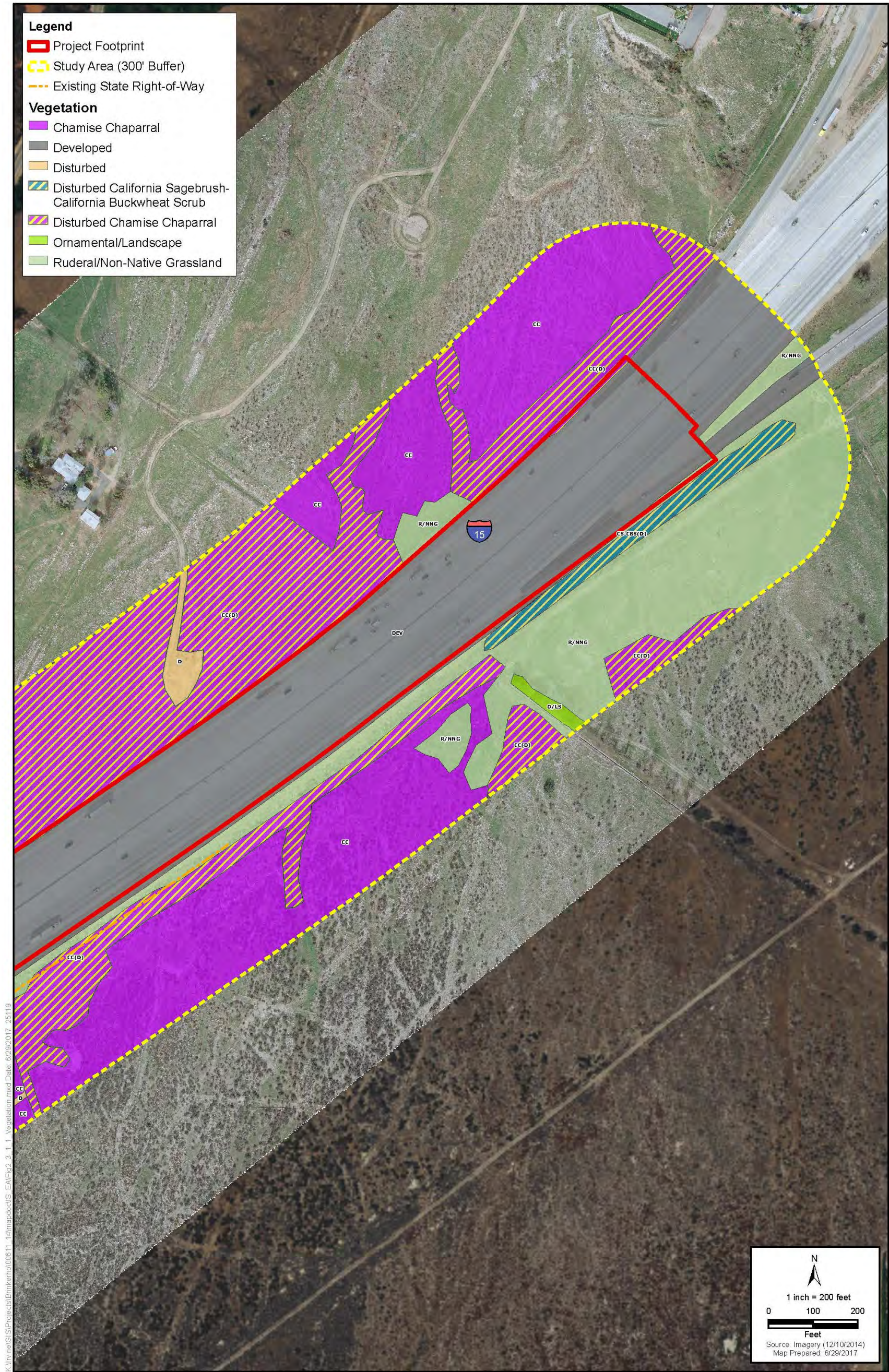
Areas mapped as Arroyo Willow Thicket are dominated by arroyo willow. A few individuals of black willow (*Salix goodingii*) and mulefat are intermixed in this vegetation community. Within the BSA, this vegetation community is limited to two isolated patches that are surrounded by development. One patch is located just north of the I-15 between Roundup Lane and Heron Way in San Bernardino County, and the other is located along the north side of Mission Boulevard in Riverside County.

Figure 2-51. Vegetation Communities and Land Cover Types Index



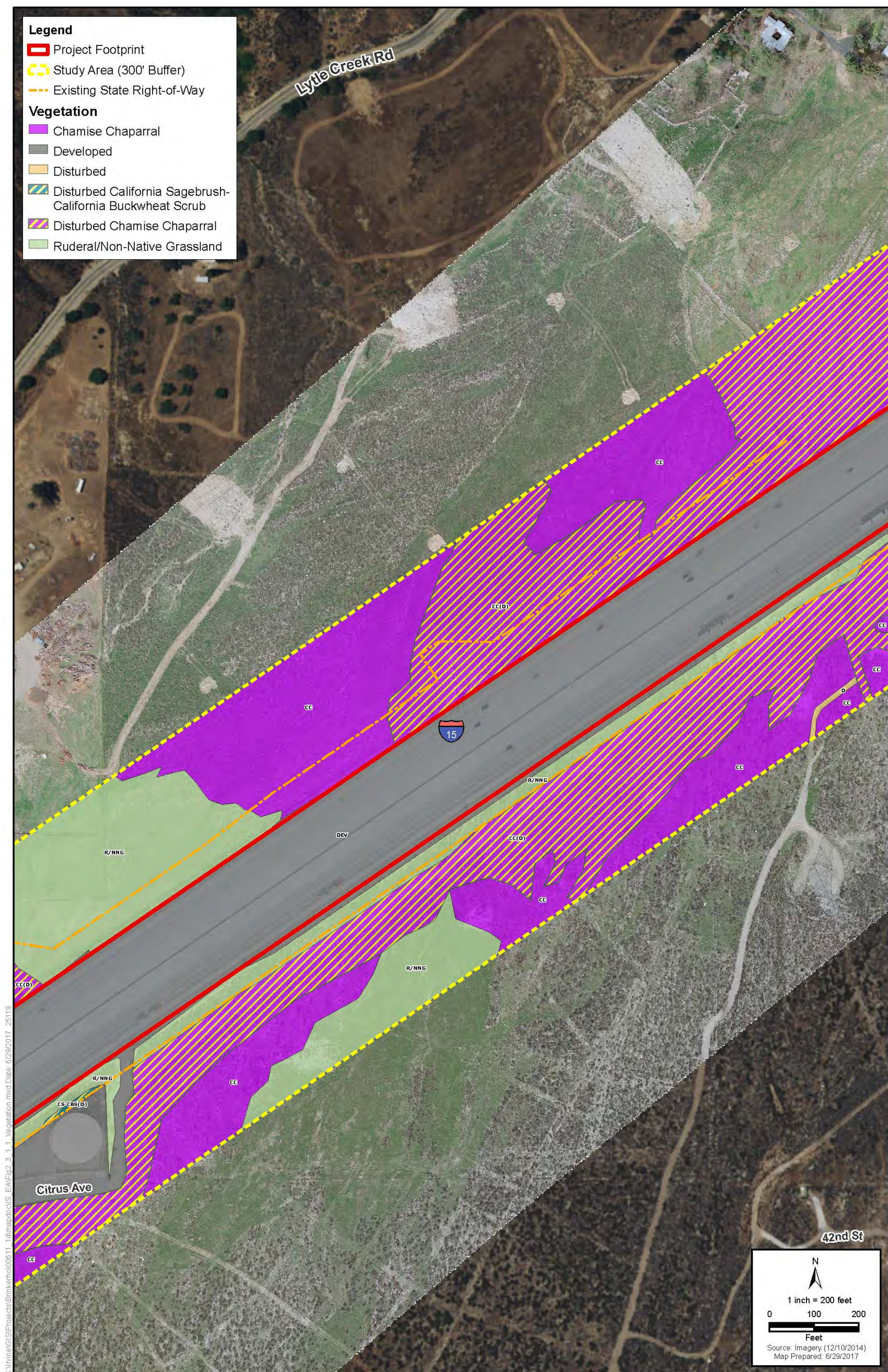
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 1



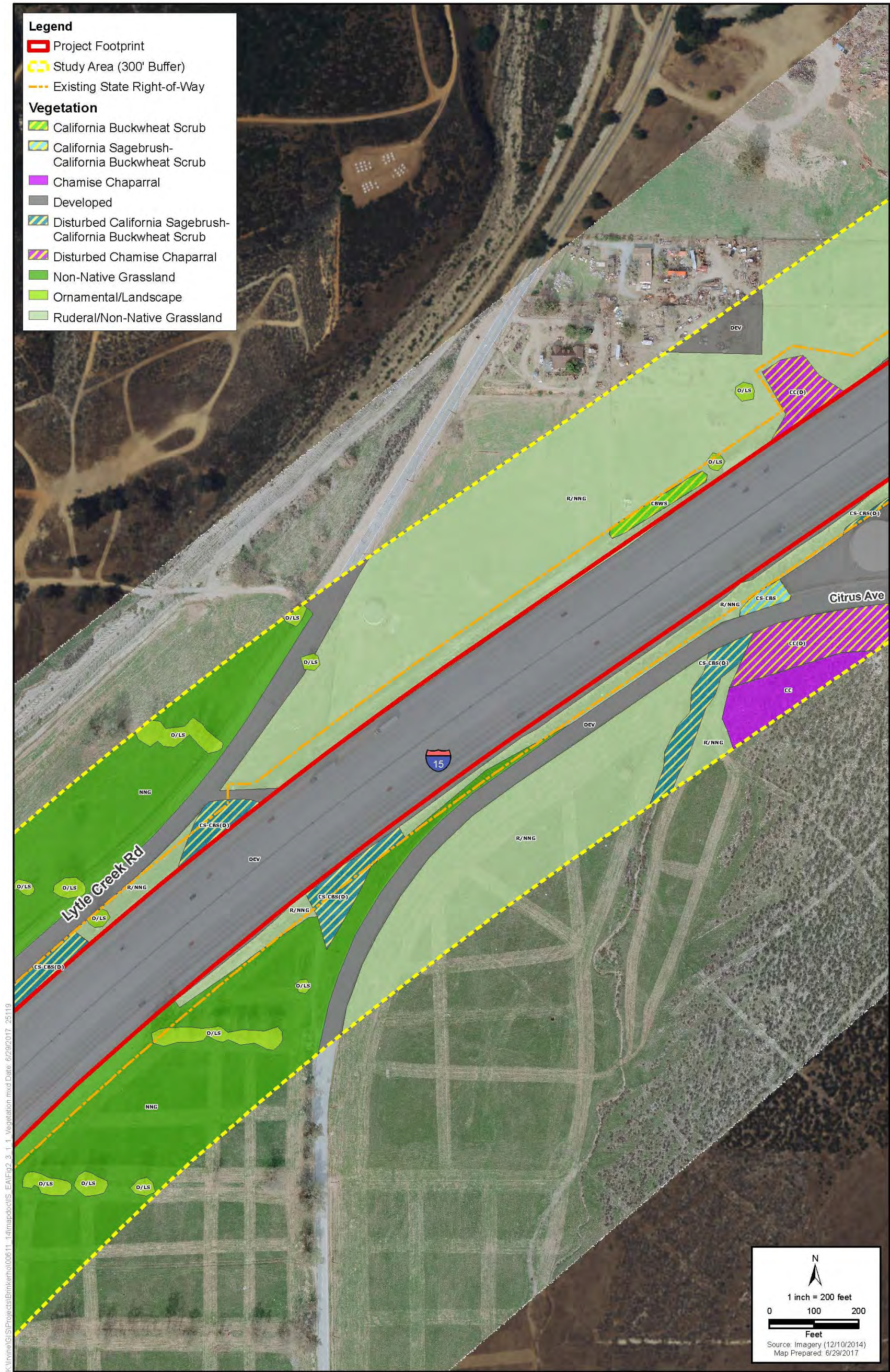
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 2



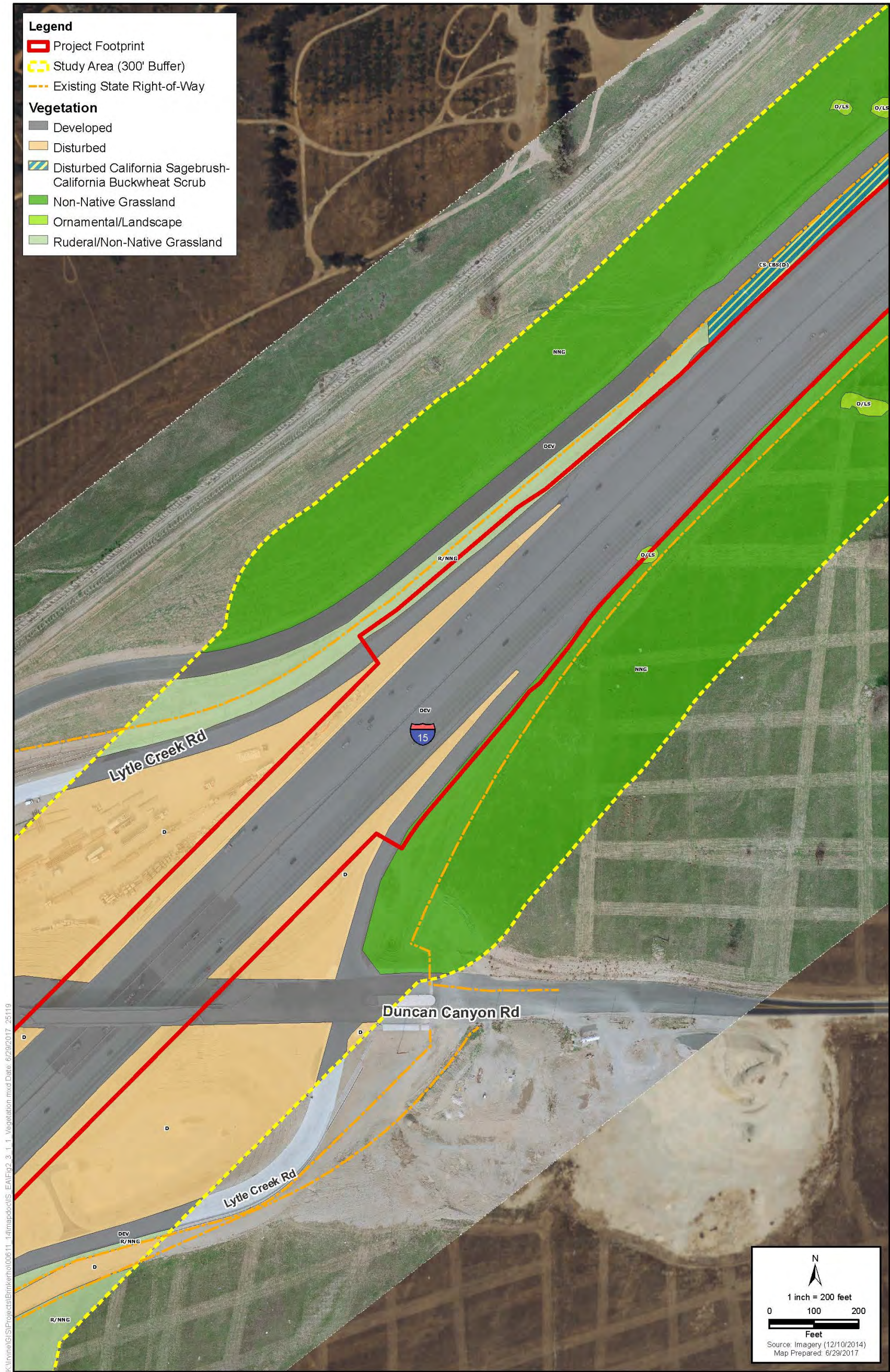
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 3



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 4



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 5



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 6



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 7



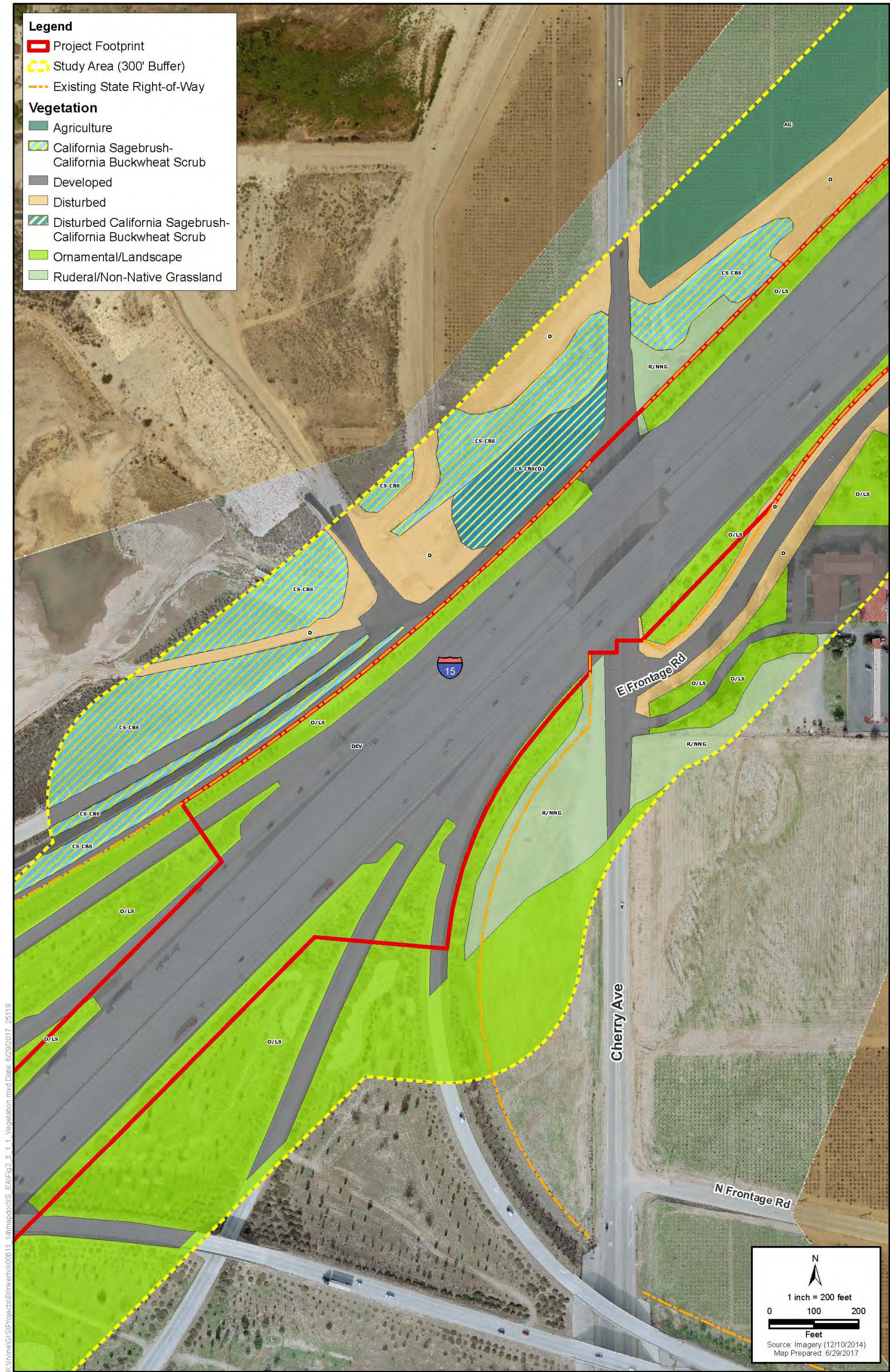
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 8



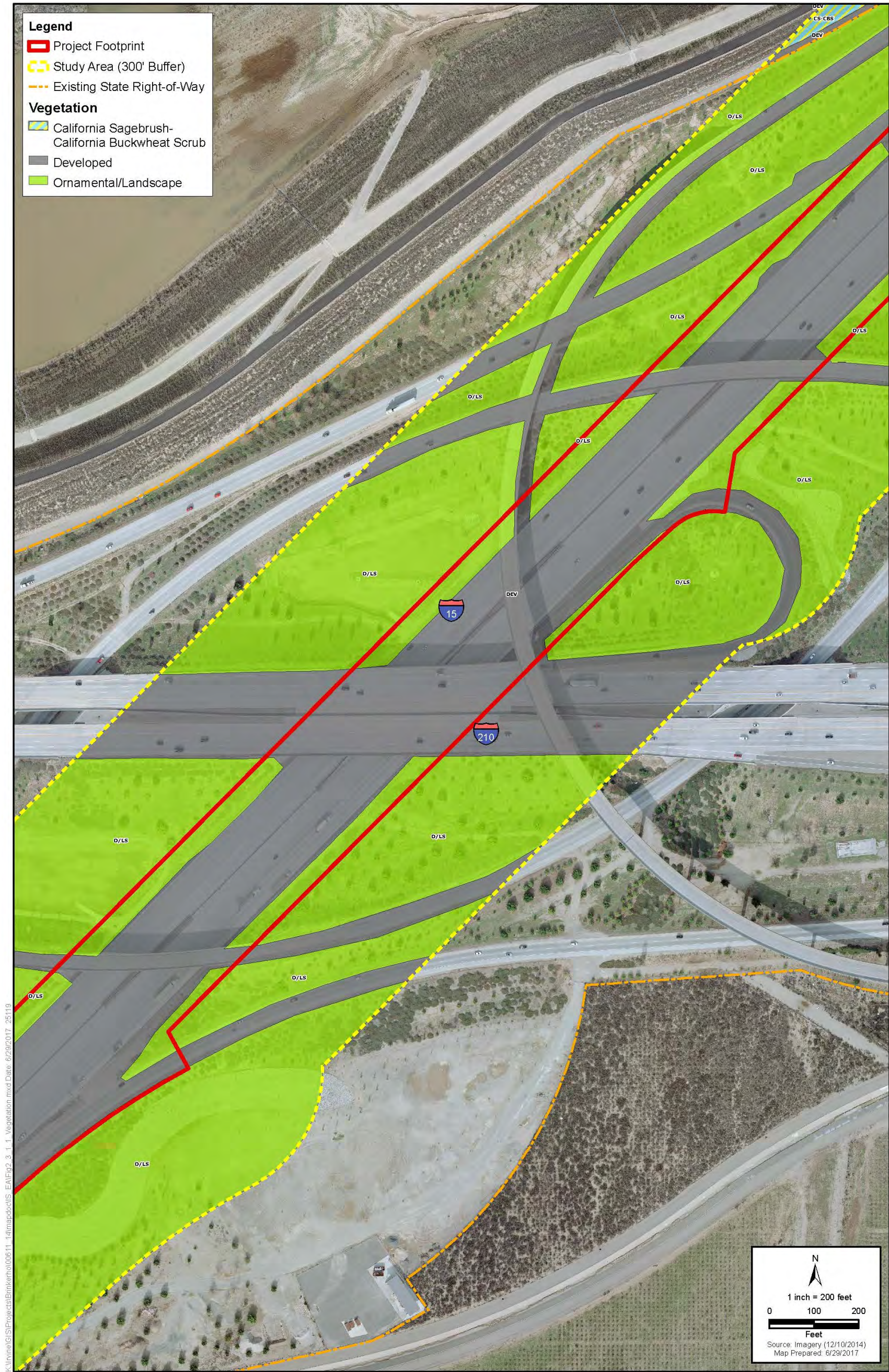
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 9



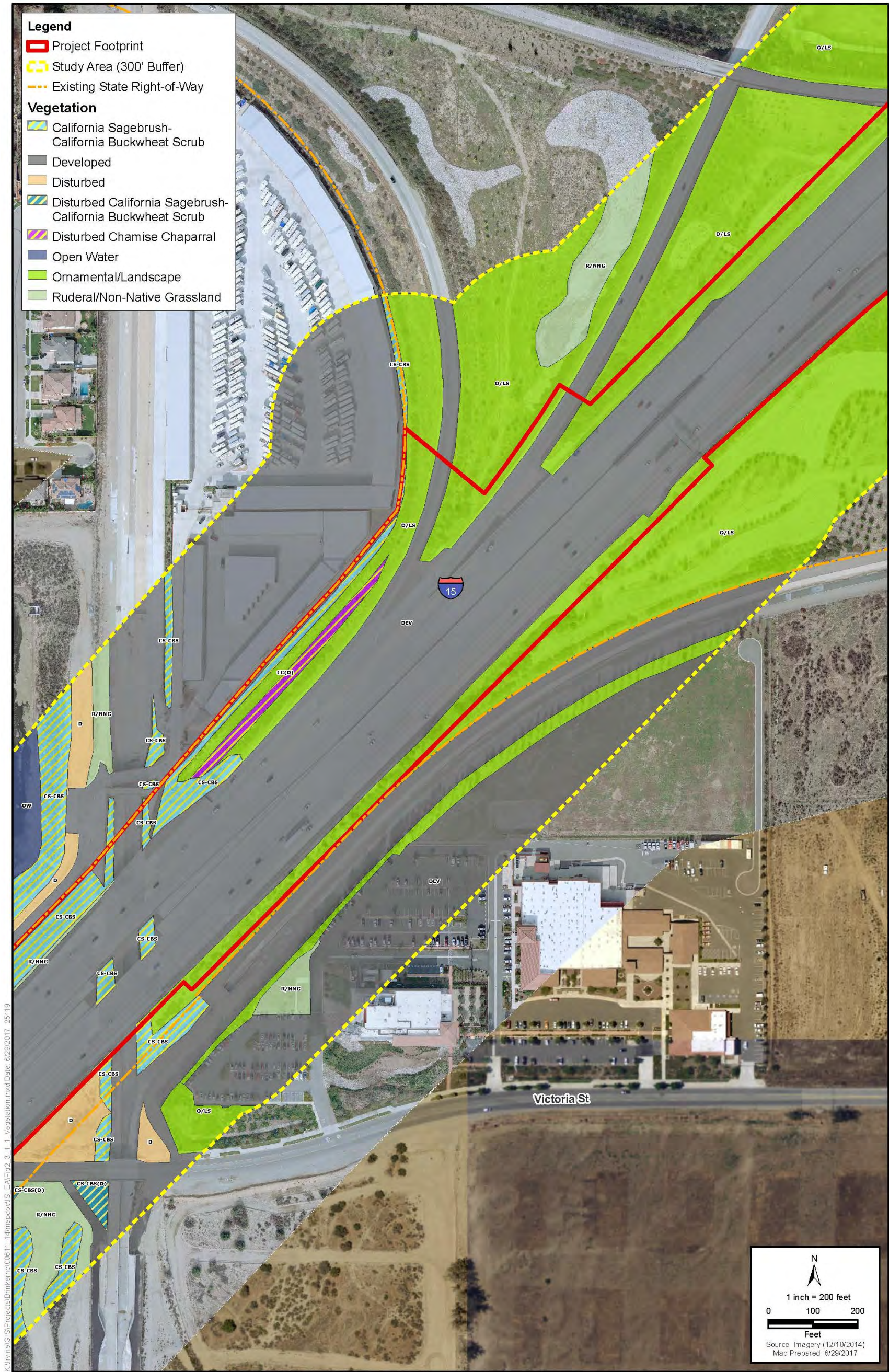
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 10



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 11



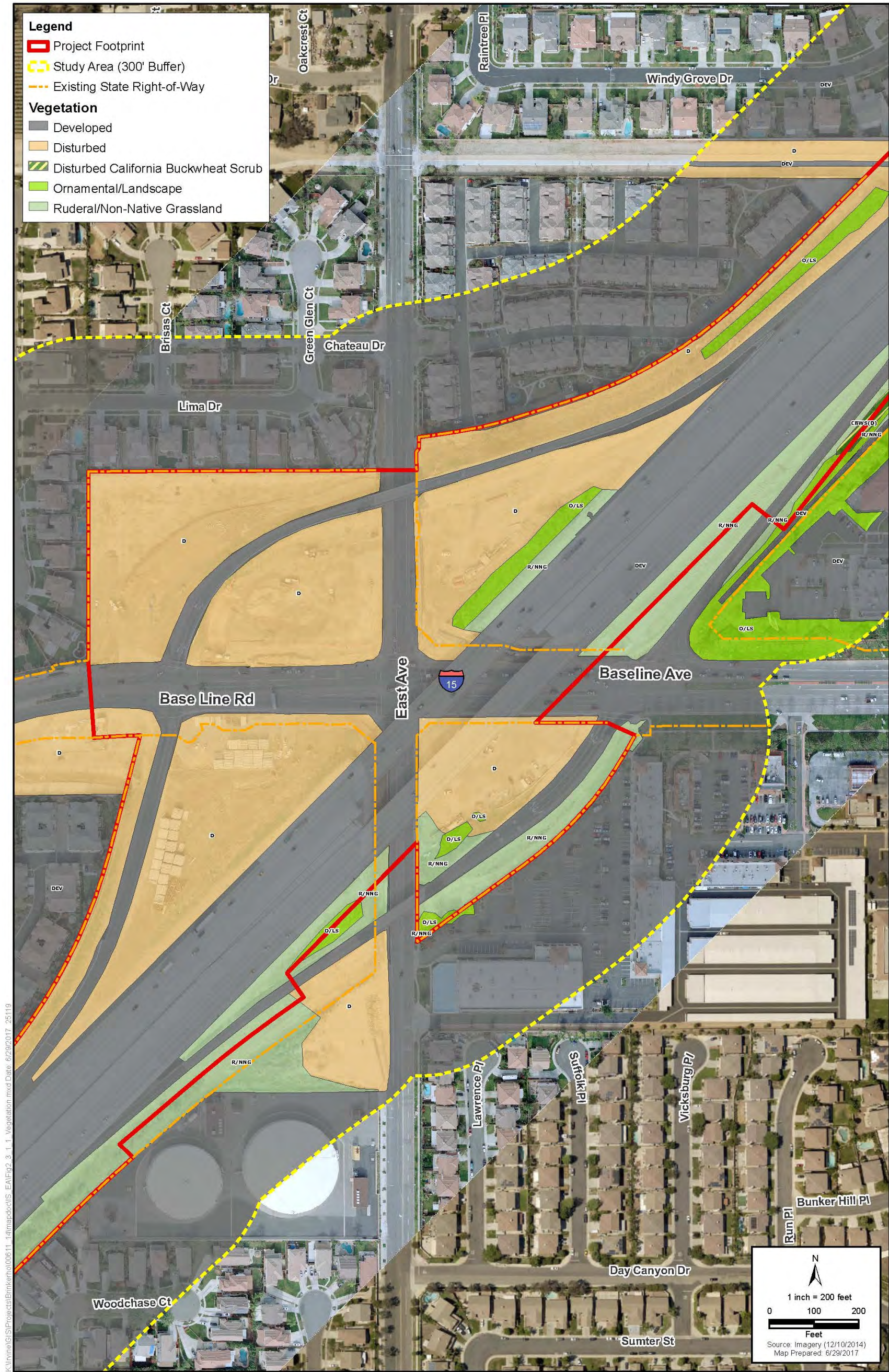
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 12



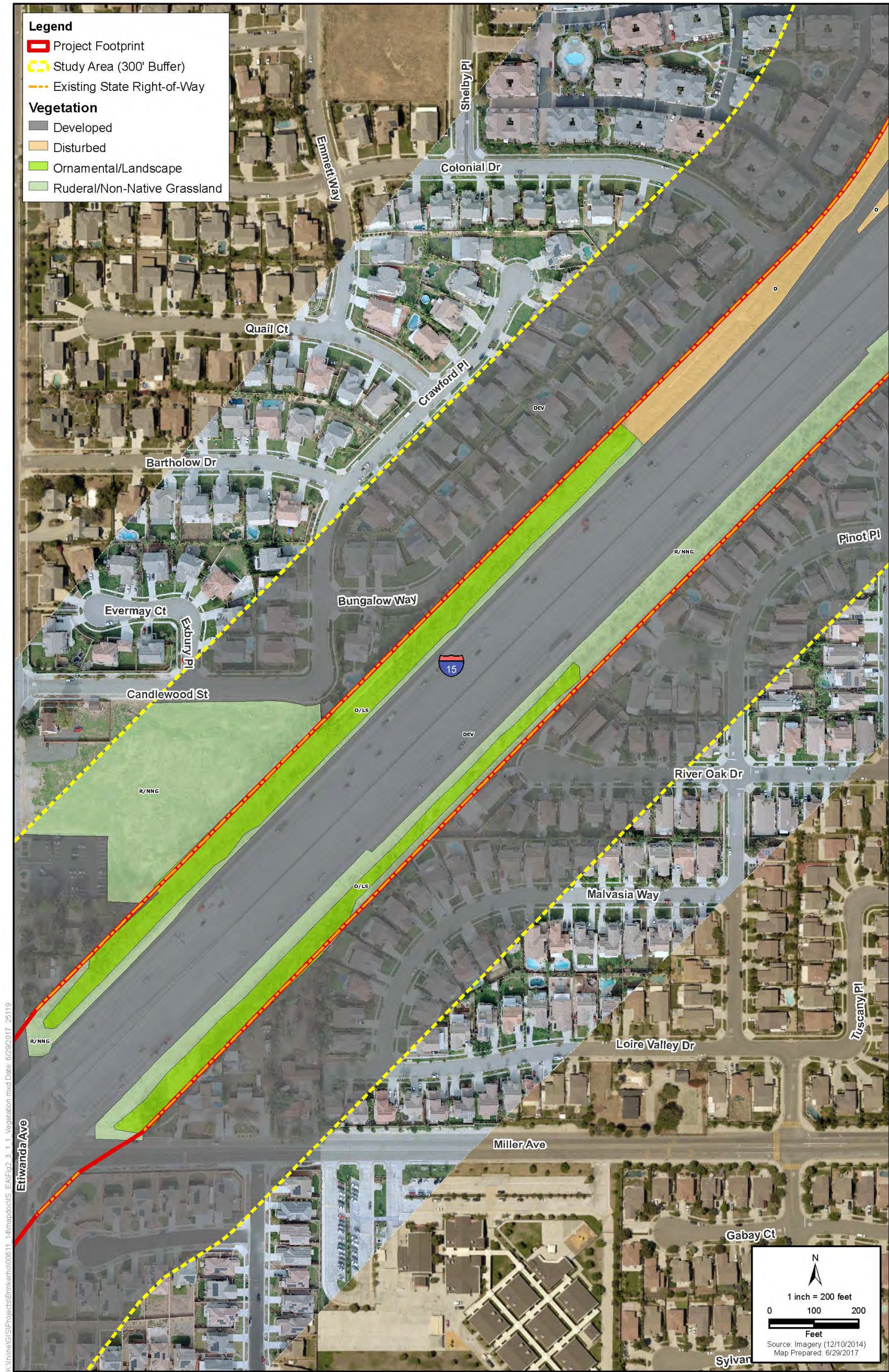
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 13



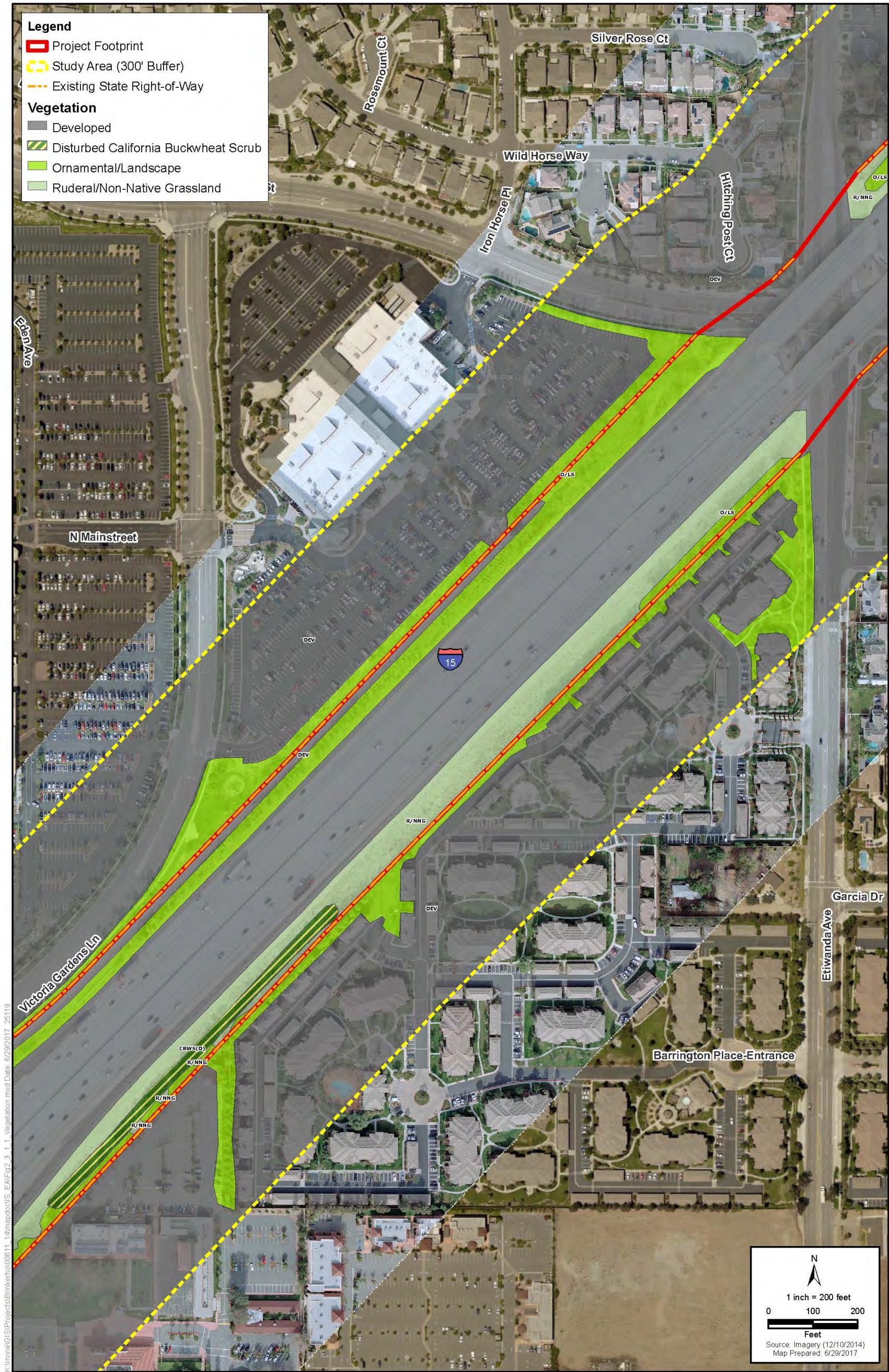
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 14



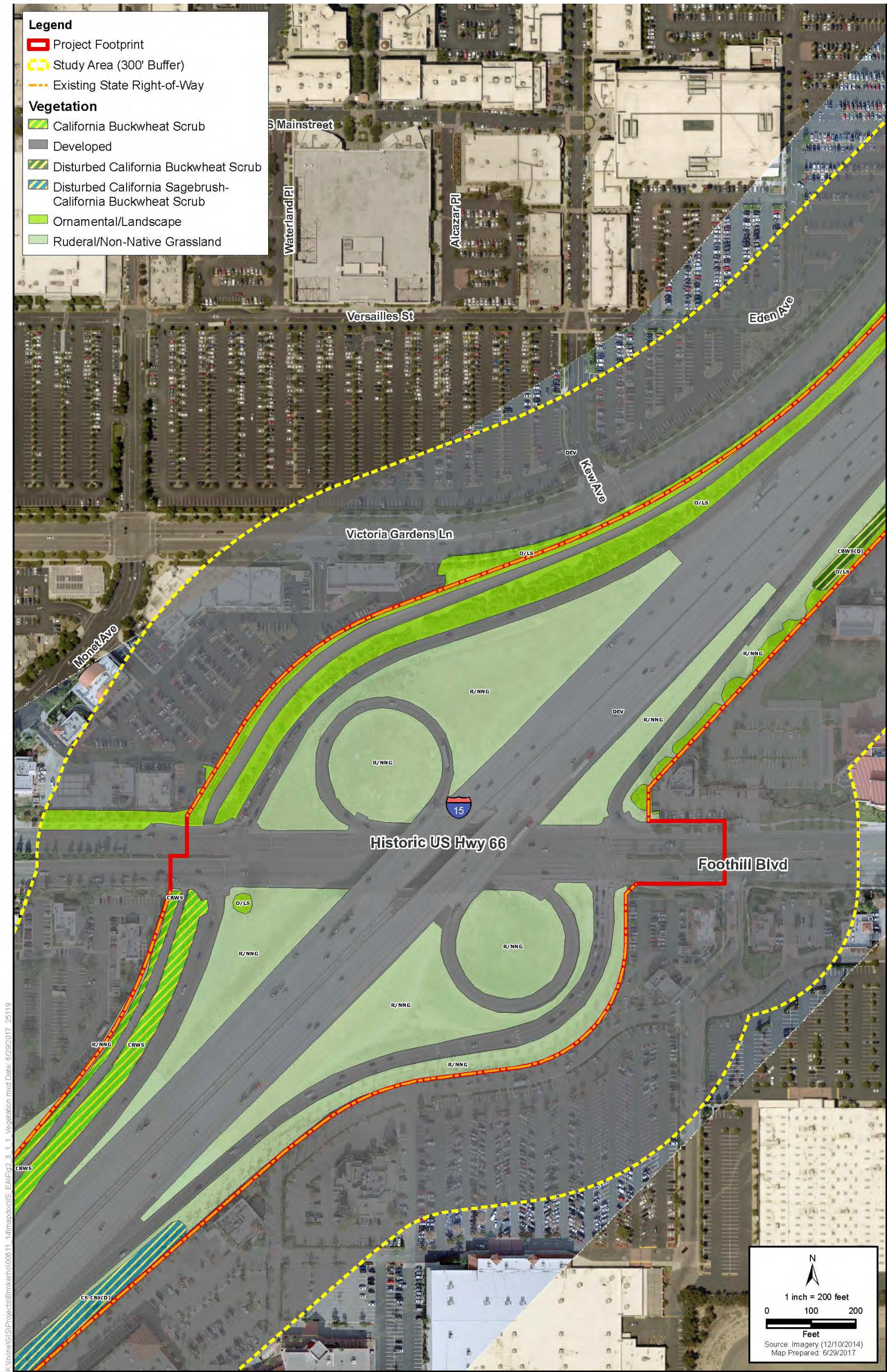
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 15



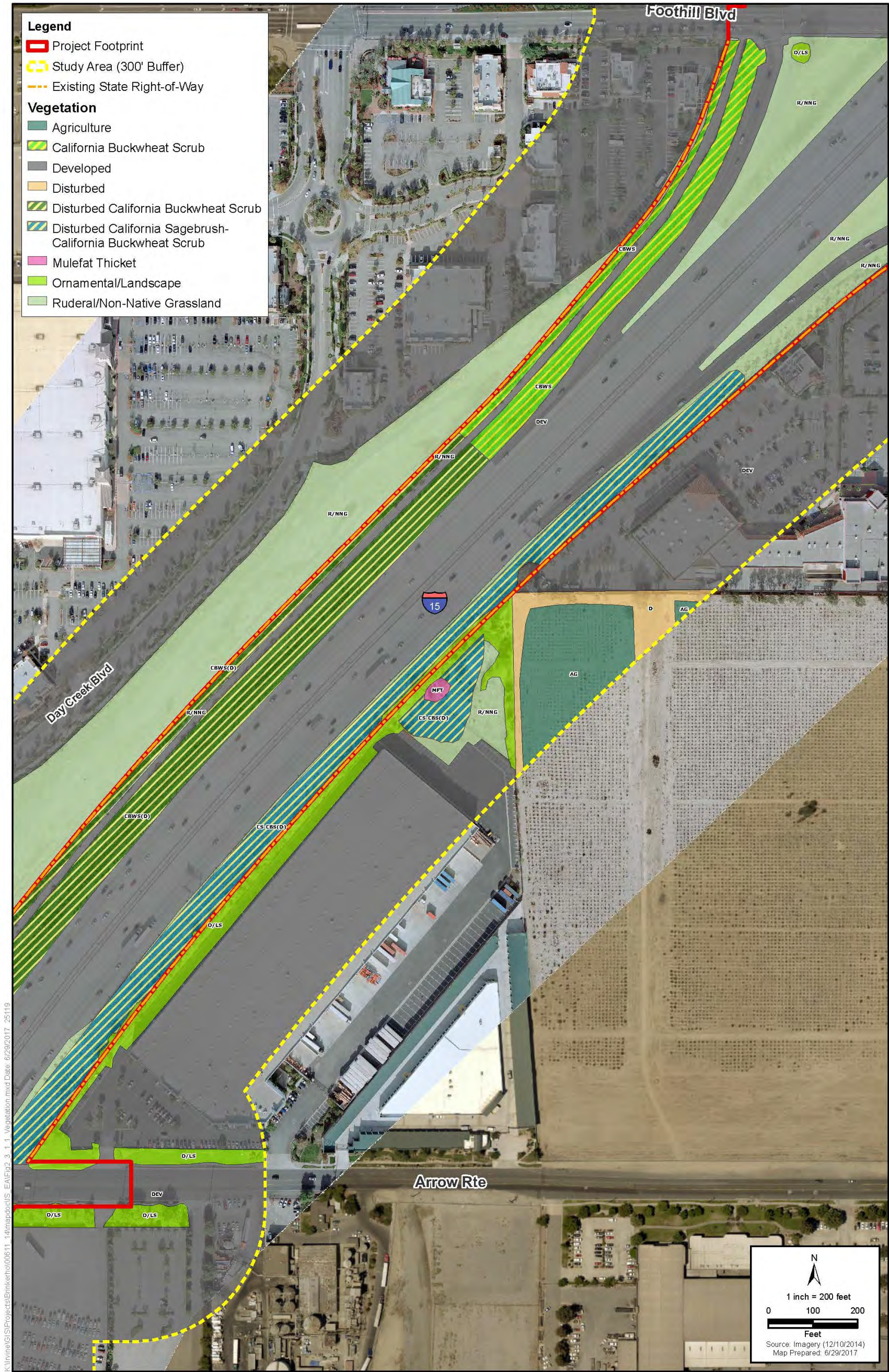
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 16



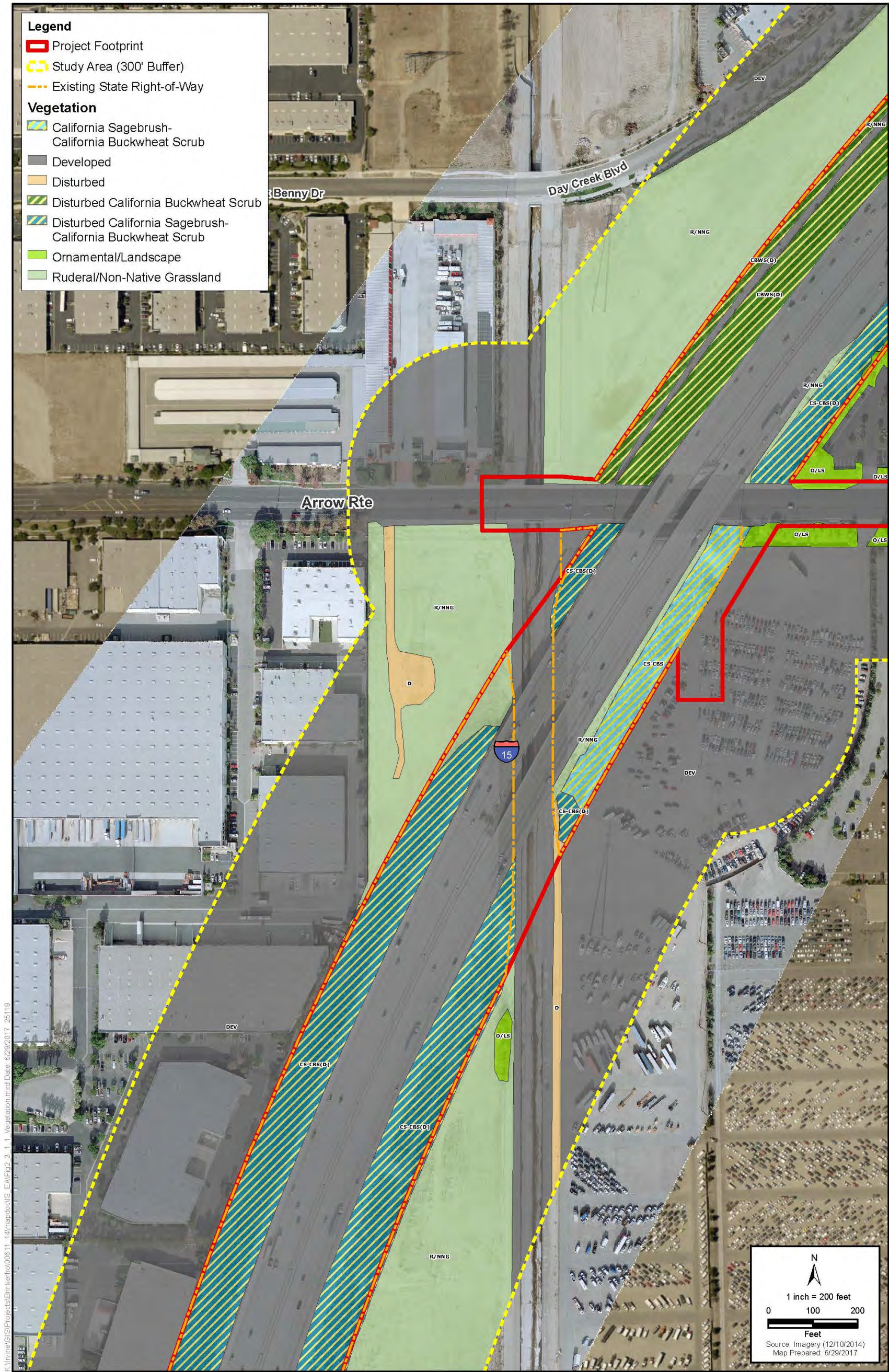
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 17



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 18



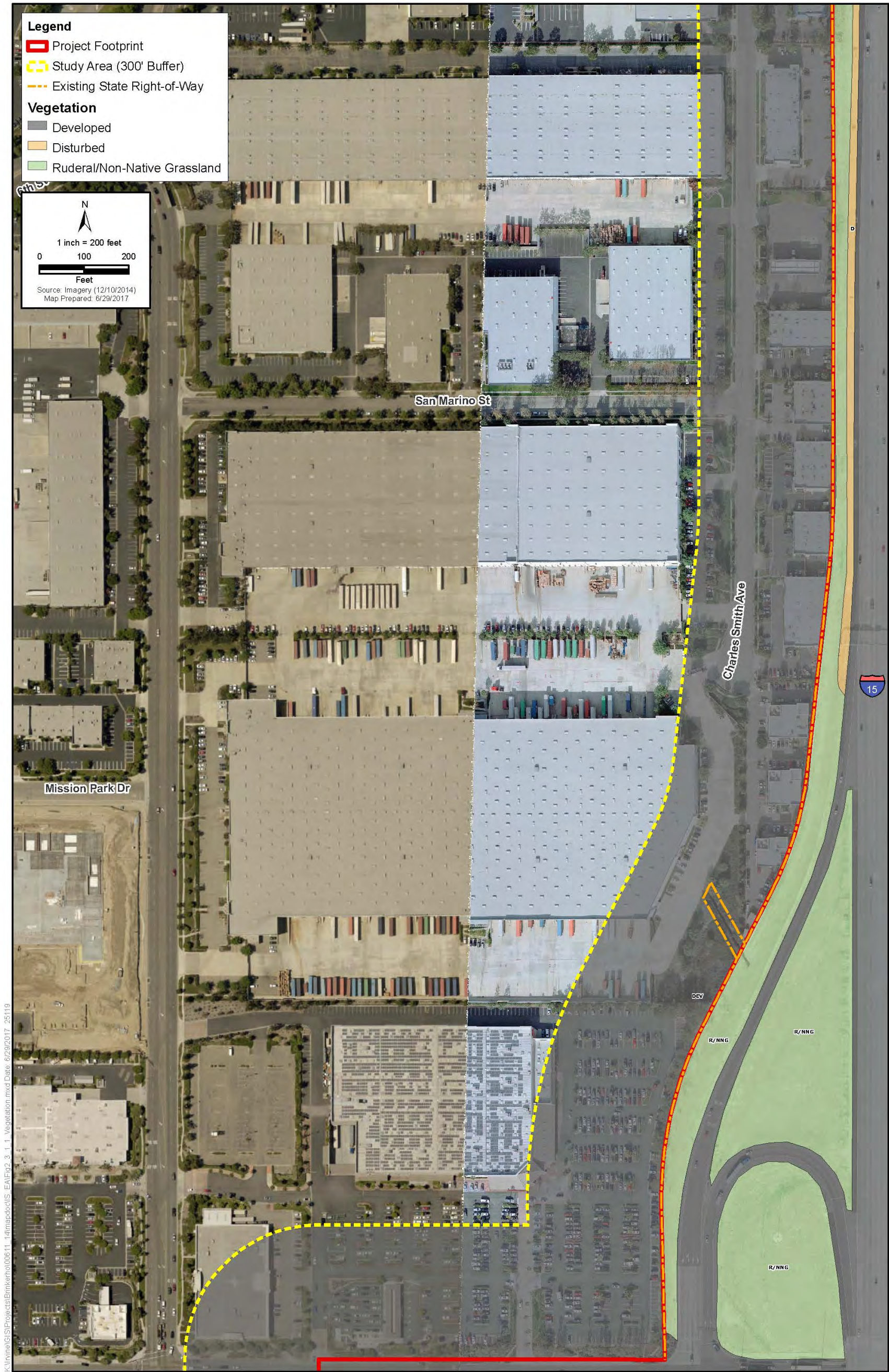
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 19



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 20



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 21



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 22



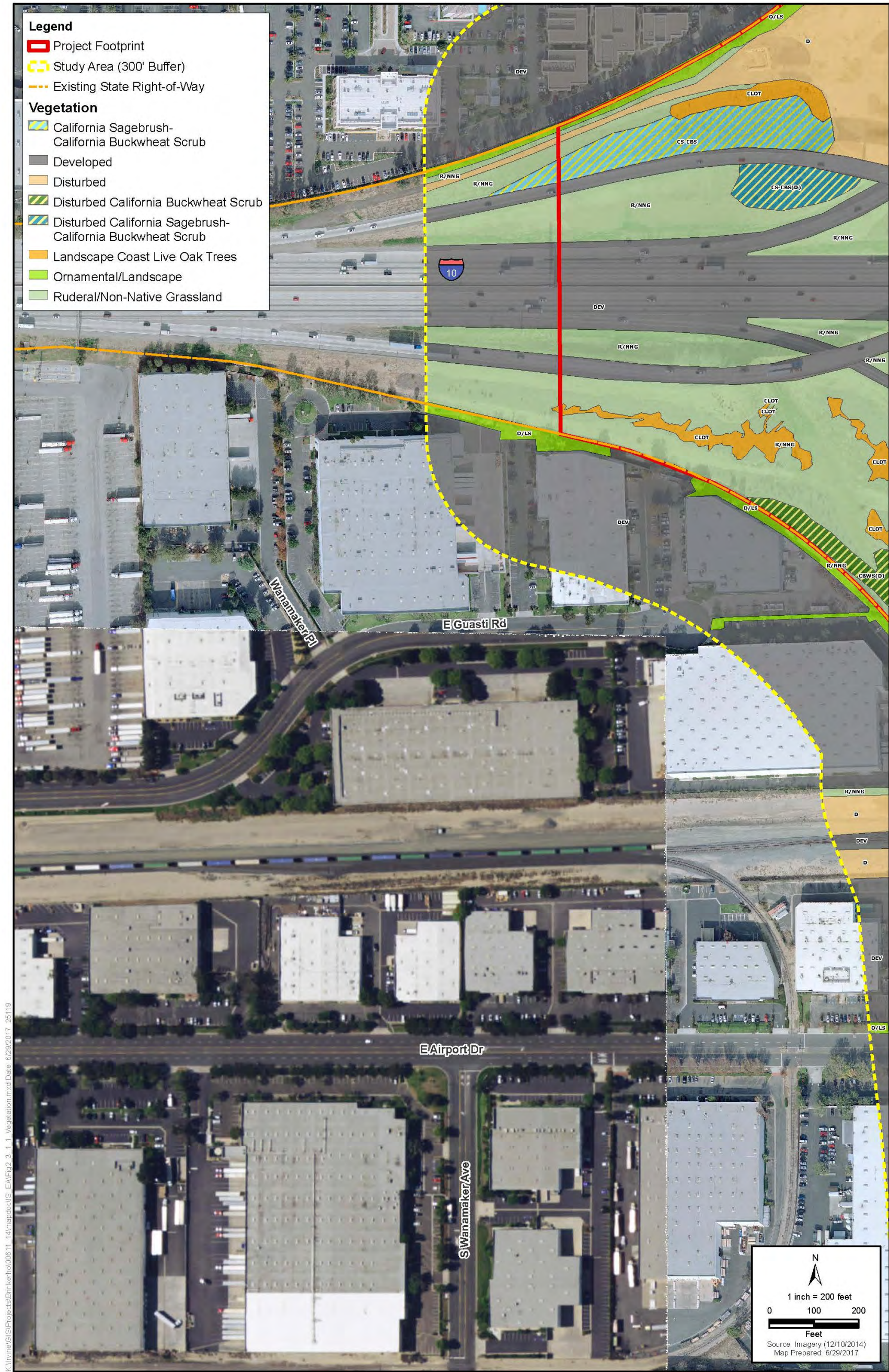
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 23



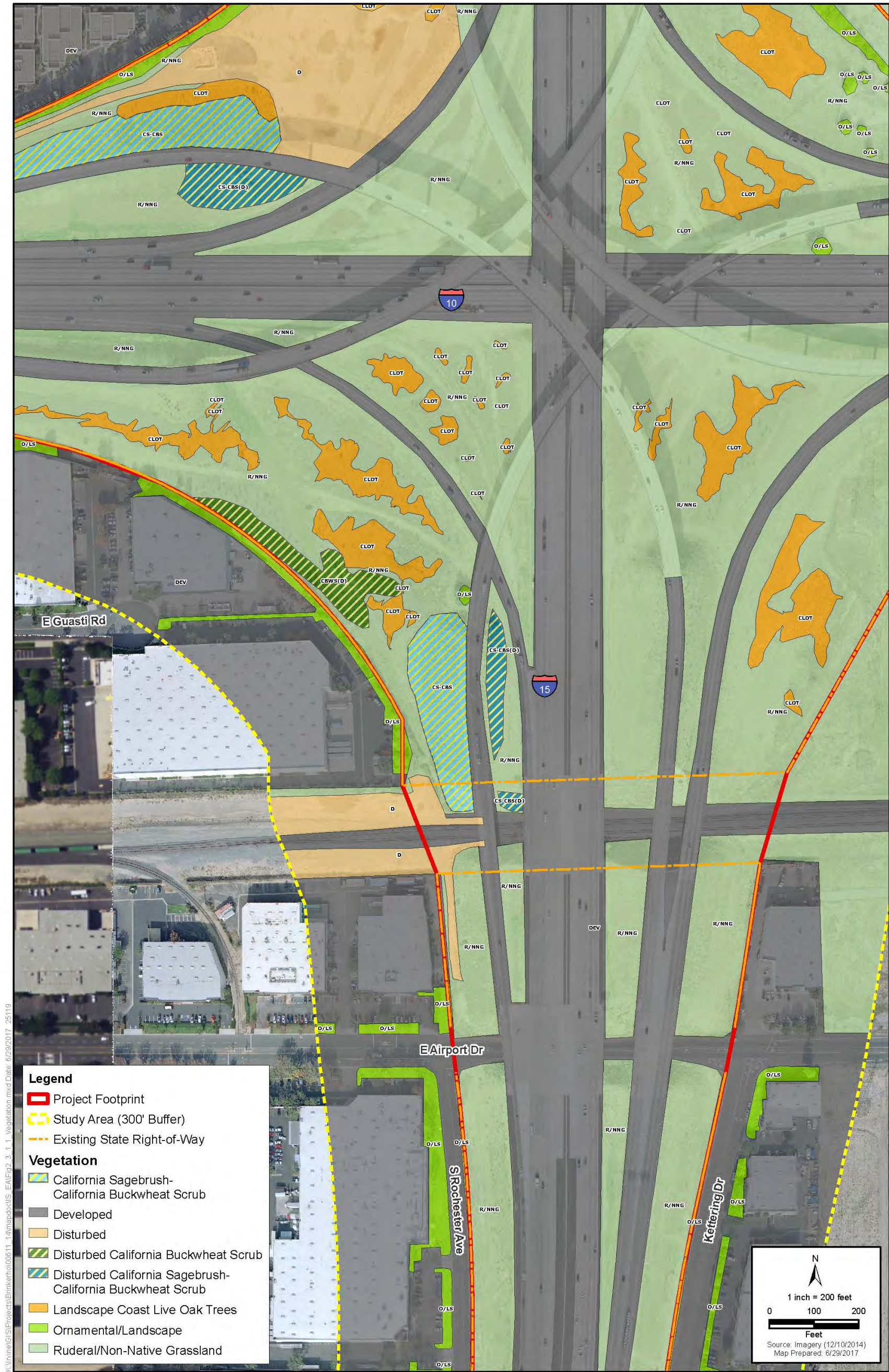
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 24



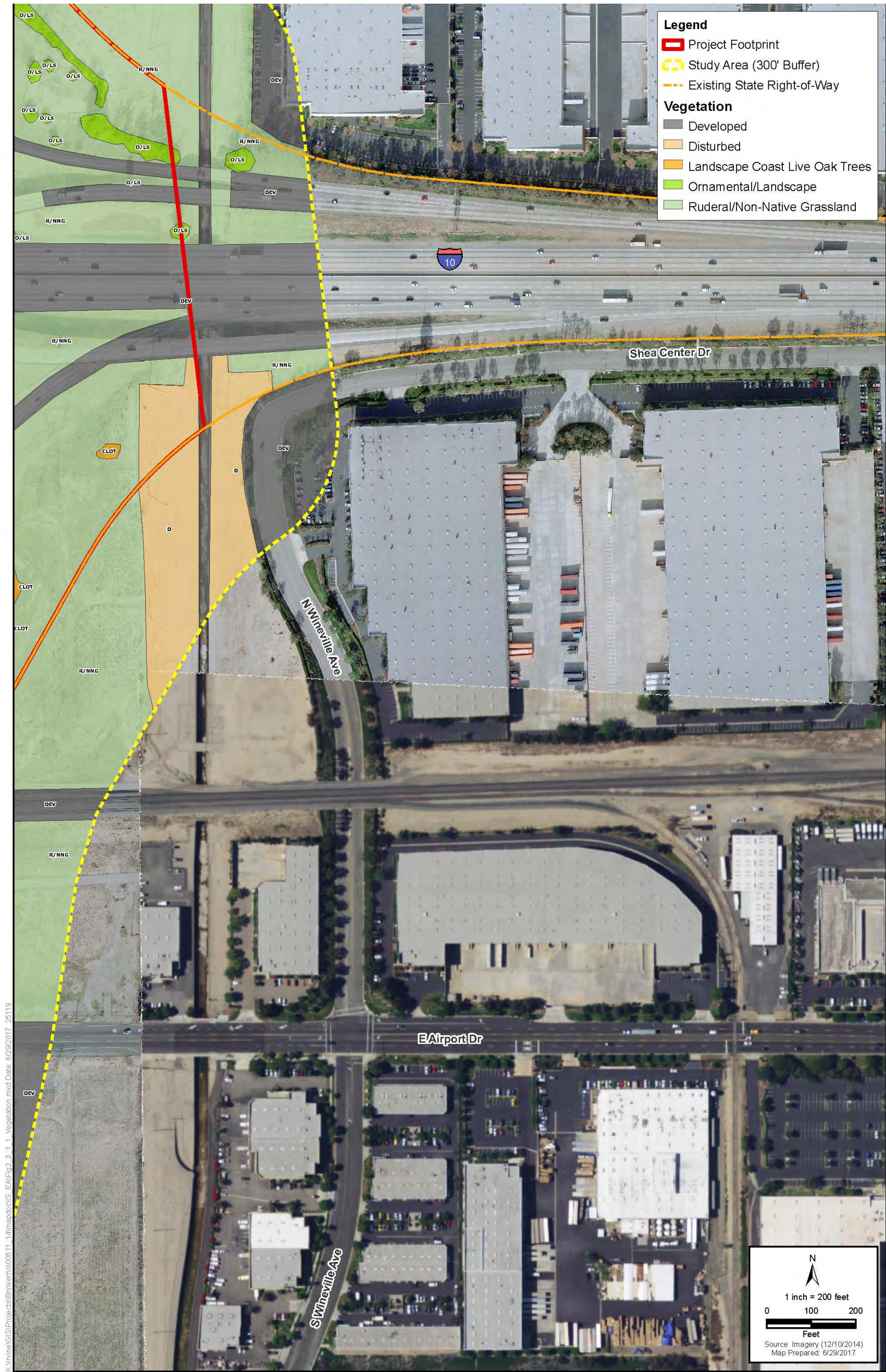
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 25



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 26



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 27



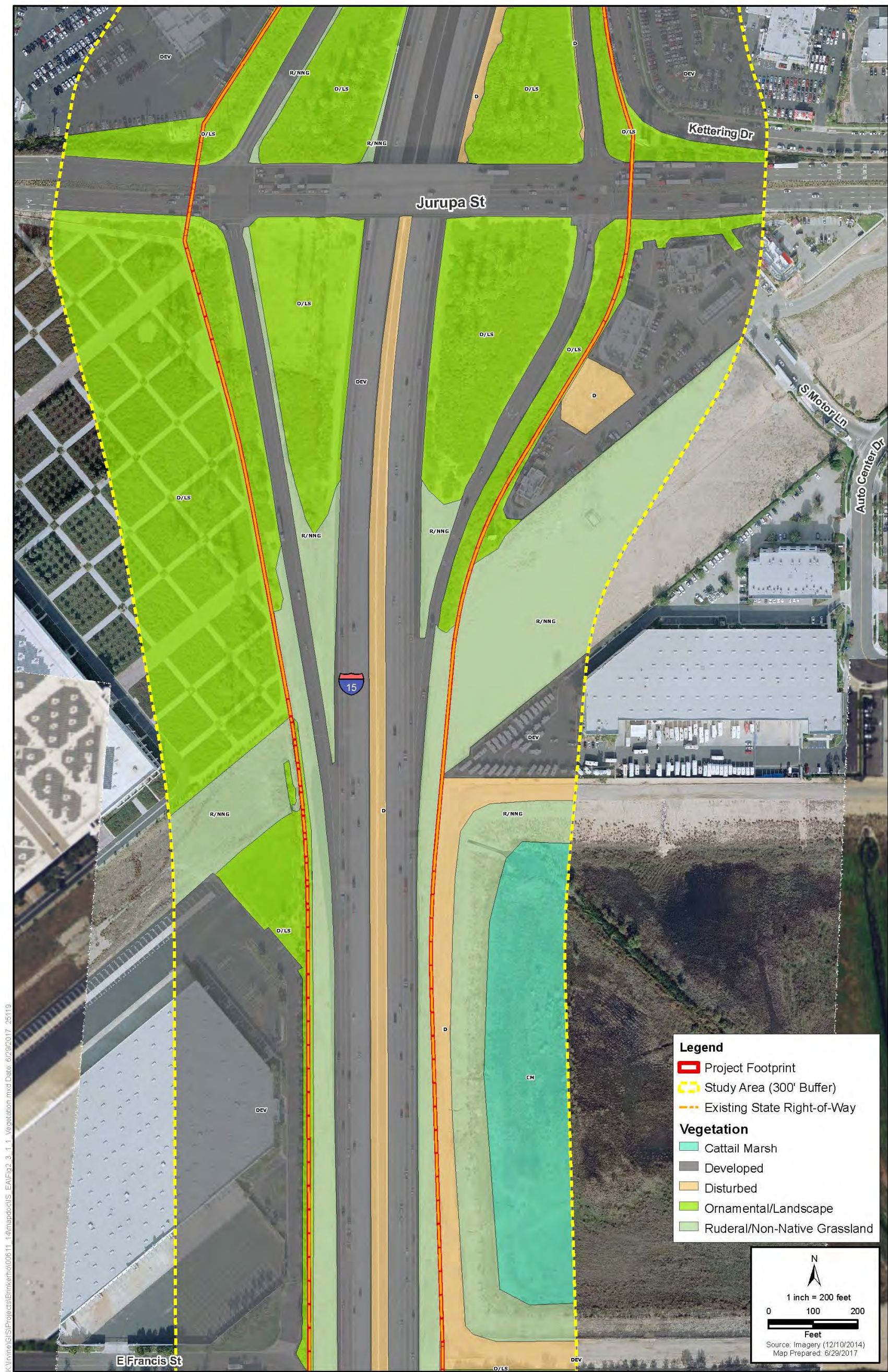
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 28



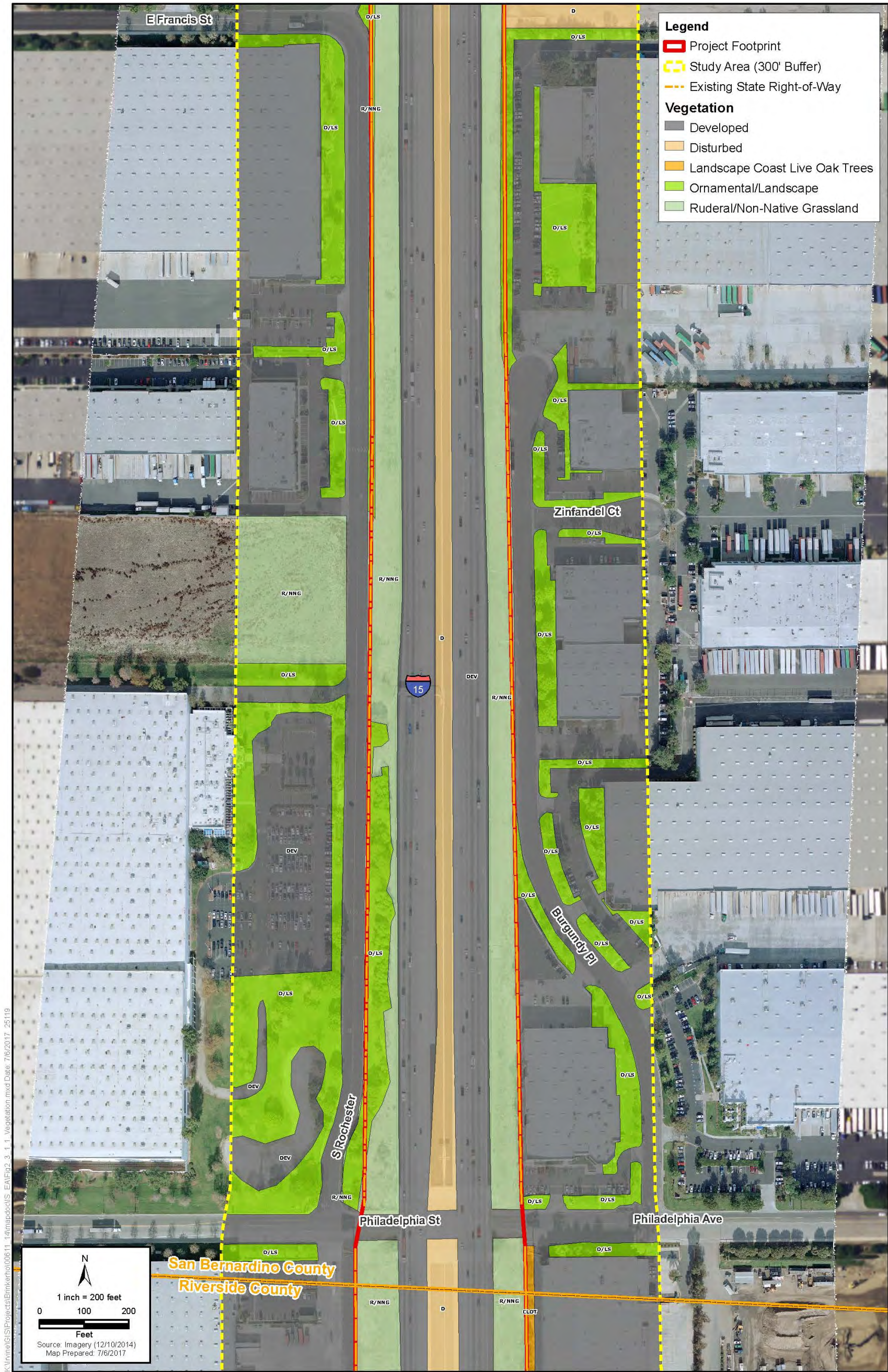
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 29



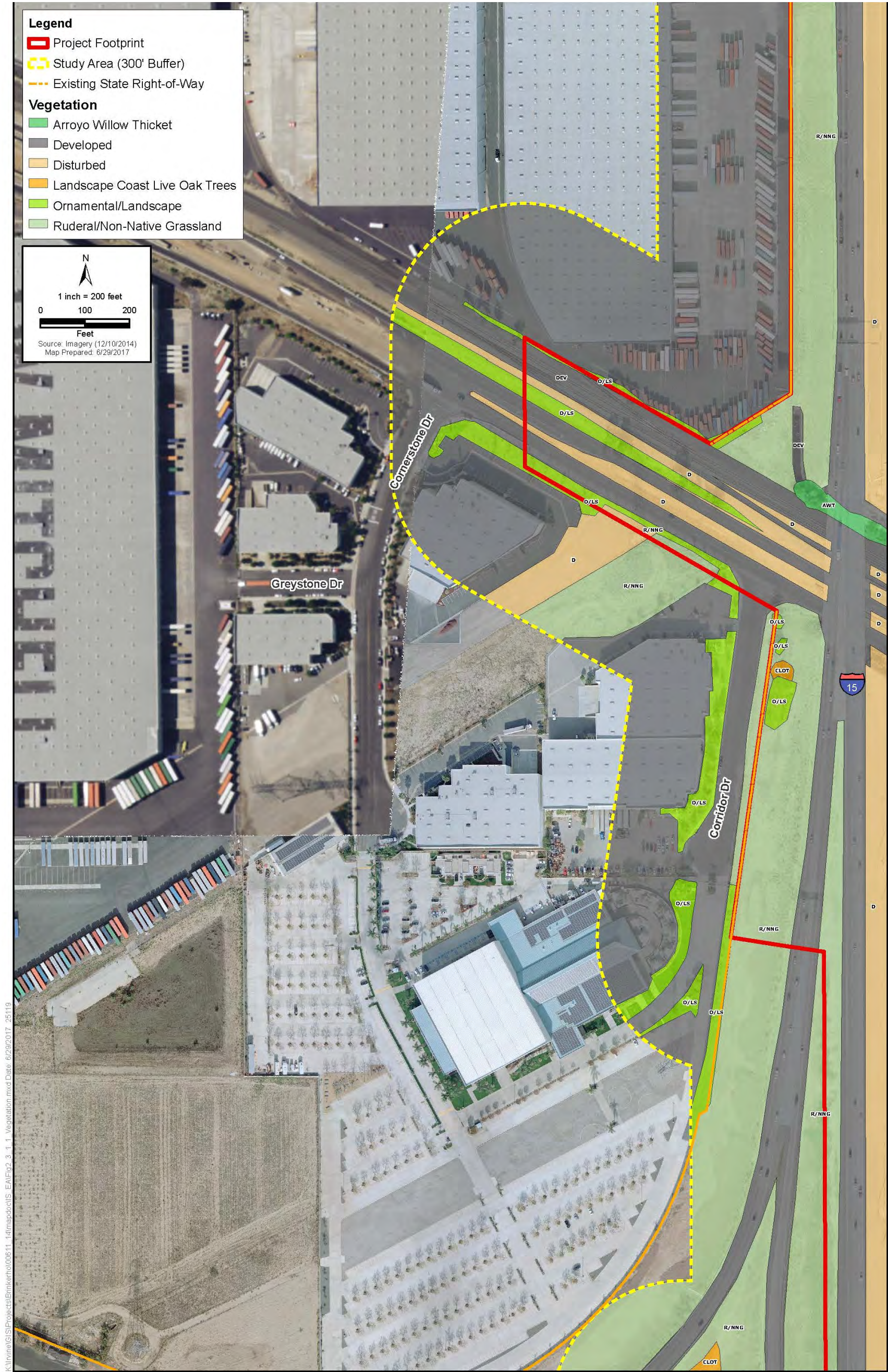
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 30



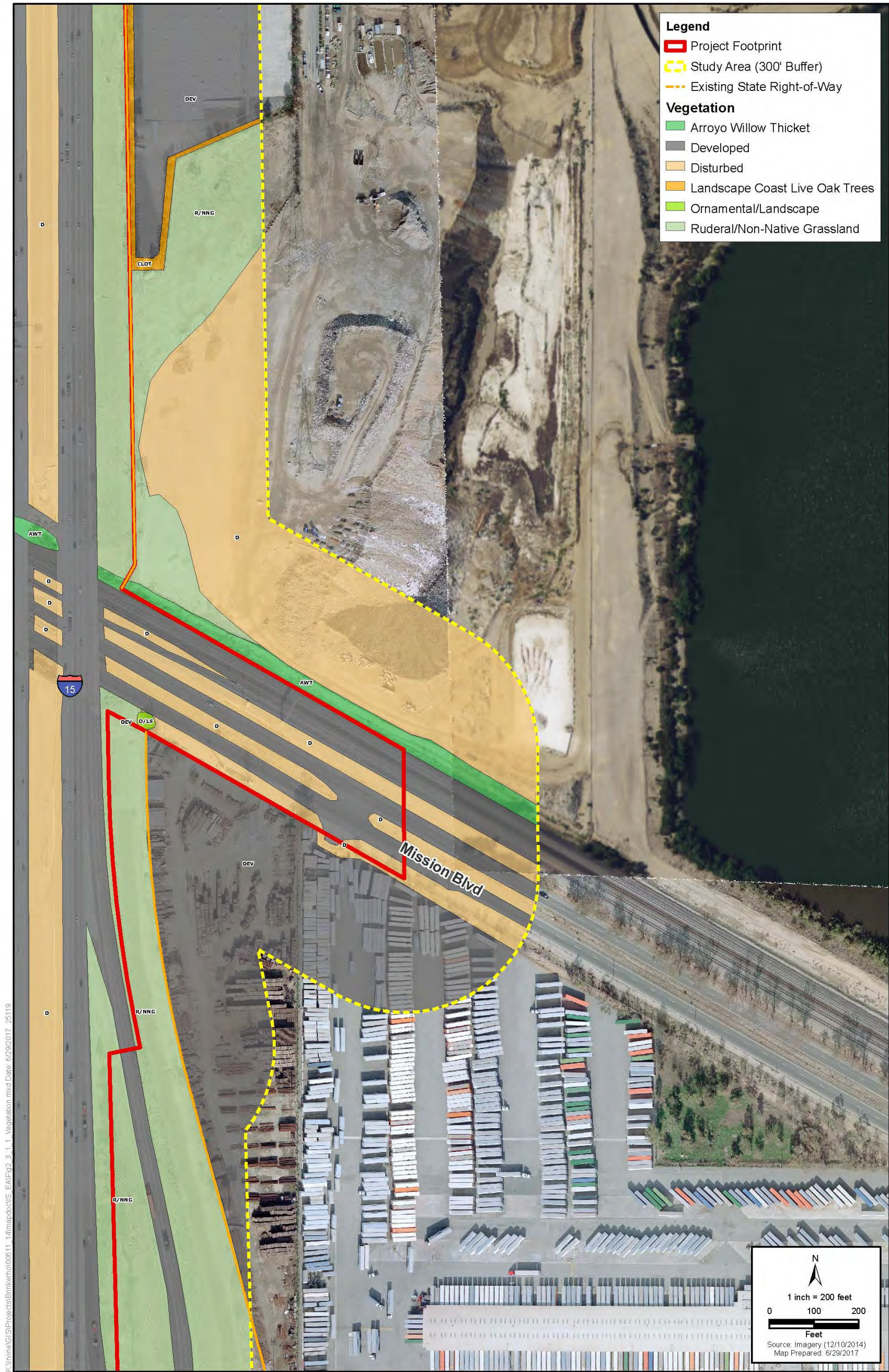
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 31



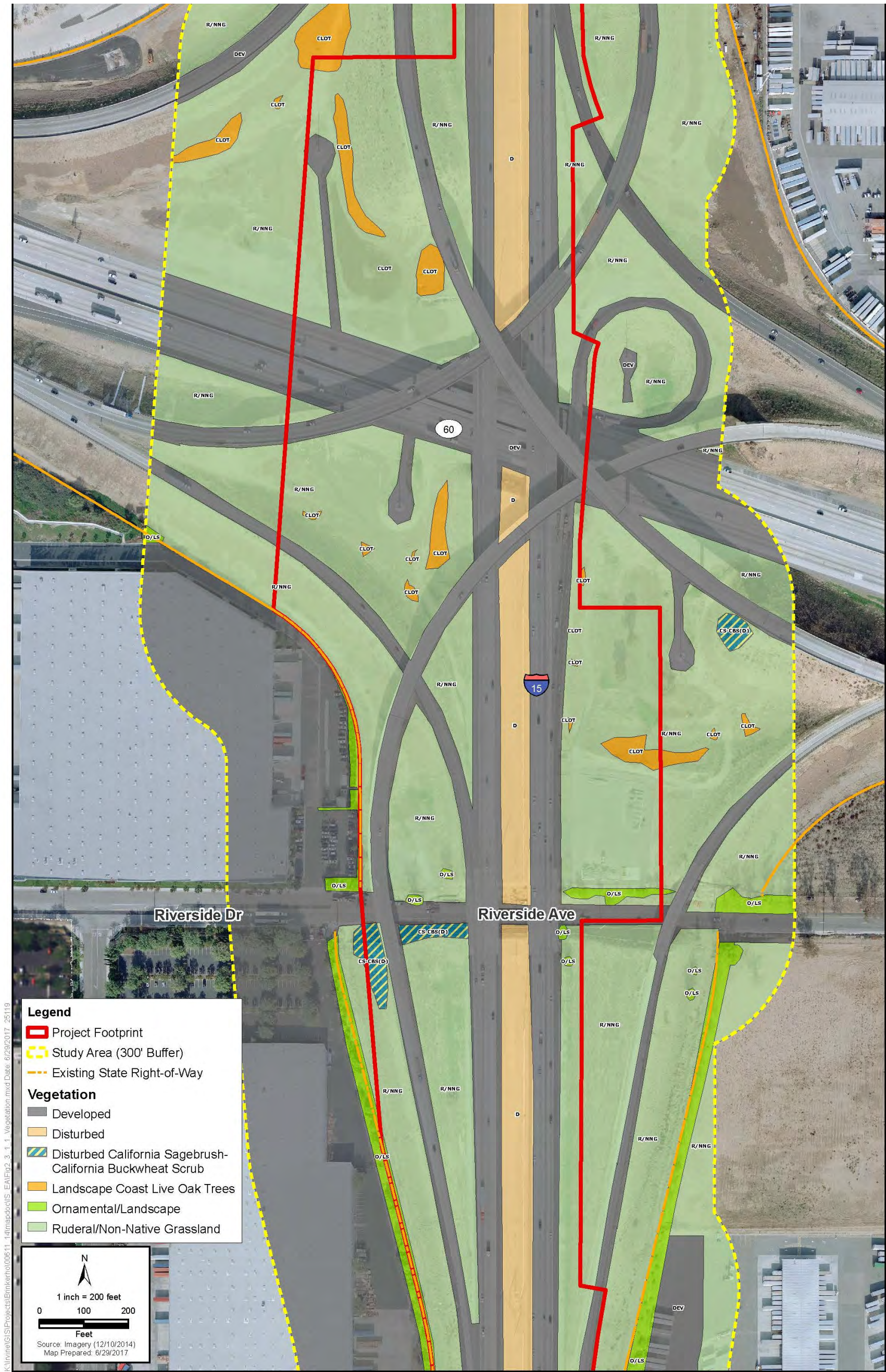
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 32



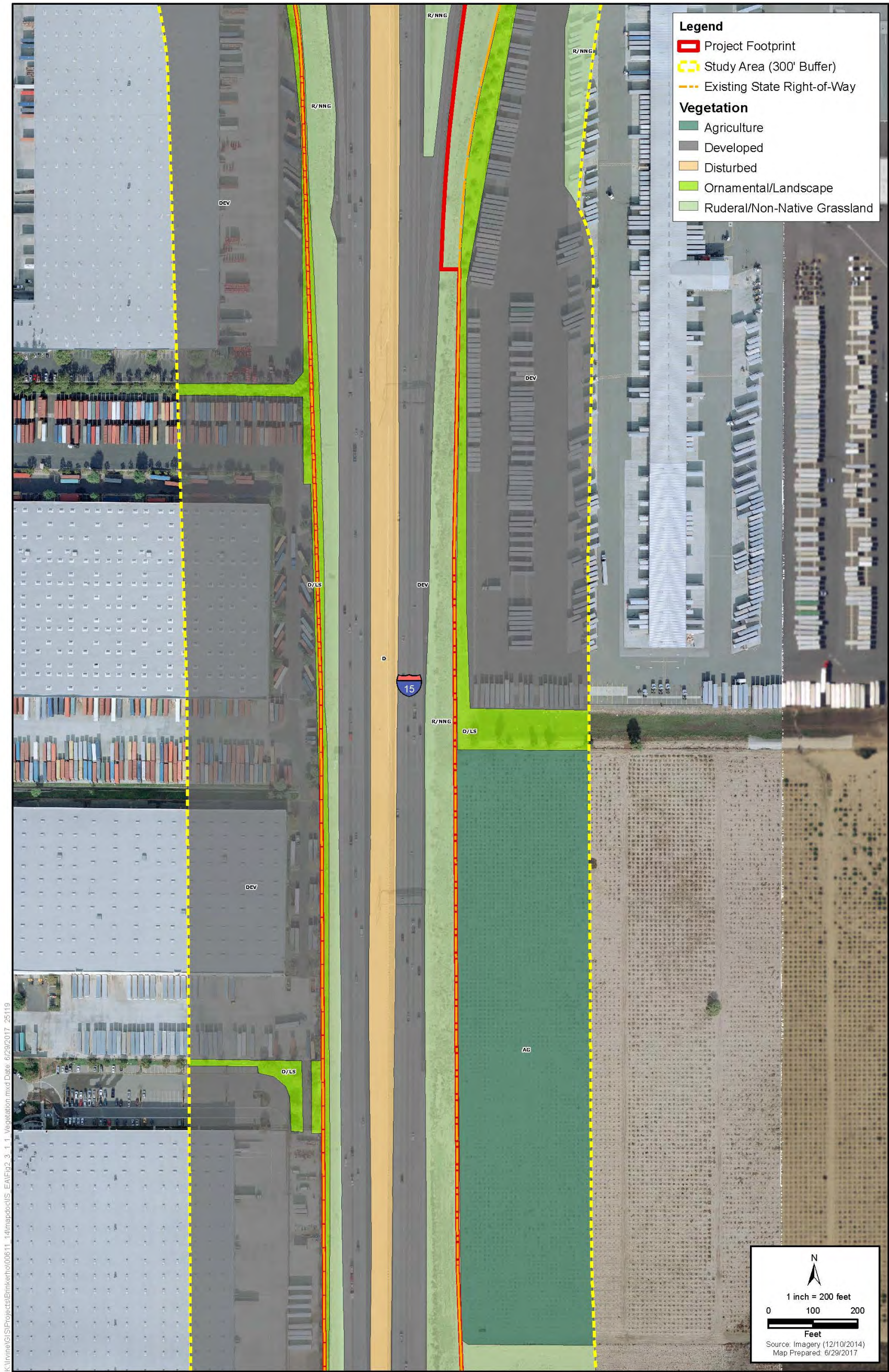
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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 33



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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 34

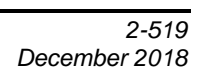


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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 35



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Initial Study/Environmental Assessment
I-15 Corridor Project PA/ED

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Figure 2-51. Vegetation Communities and Land Cover Types – Sheet 37



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Chamise Chaparral/Disturbed Chamise Chaparral

Areas mapped as Chamise Chaparral are dominated by chamise (*Adenostoma fasciculatum*), California buckwheat, white sage, and Our Lord's Candle (*Hesperoyucca whipplei*) and have a low cover of annual and perennial forbs and grasses. Areas mapped as Disturbed Chamise Chaparral are dominated by a mixture of shrubs including chamise, California buckwheat, and deerweed, but contain a moderate to high cover of both native and non-native ruderal forbs and grasses such as common fiddleneck, red-stemmed filaree, long-beaked filaree, Mediterranean schismus, red brome, and wild oats that limit the overall cover of bare areas. Areas mapped as both Chamise Chaparral and Disturbed Chamise Chaparral show historical evidence of their alluvial nature, such as rocky alluvium material, bare areas, and an overall low cover of grass species. However, many of these areas have been cut off from the alluvial processes by various means, such as the construction of I-15 and adjacent roadways across the alluvial fan, the channelization of creeks, and land clearing and other anthropogenic disturbances associated with the development of private lands. CDFW classifies this vegetation type, which is also generally referred to as Riversidean Alluvial Fan Sage Scrub, as a sensitive vegetation community.

Agriculture

Areas mapped as Agriculture are active or recently active agricultural areas and vineyards, and associated access roads. Vineyards are scattered throughout the BSA. These areas are regularly maintained and understory is minimal, consisting mostly of scattered, non-native weeds. Many ruderal vineyards are also present that appear to have been abandoned.

Developed

Areas mapped as Developed include roadways, buildings, residential housing, commercial businesses, concrete-lined flood-control facilities, and other permanent structures. These land use types were found throughout the BSA and represent the largest overall acreage in the BSA. This land use type typically contains ornamental vegetation.

Disturbed

Areas mapped as Disturbed are mostly devoid of native vegetation and have evidence of frequent human disturbance, such as discing and fire breaks. These areas usually have some cover of native or non-native ruderal or non-native grassland species, but the cover is much reduced compared to areas mapped as ruderal or non-native grassland. Areas mapped as Disturbed are mostly observed immediately adjacent to the freeway shoulder or in vacant dirt lots.

Non-Native Grassland

Areas mapped as Non-Native Grassland are dominated by non-native grass species, such as rip-gut brome (*Bromus diandrus*), red brome, and wild oats. In addition to grass species, some ruderal forb species, such as native western sunflower (*Helianthus annuus*) and common fiddleneck, and non-native summer mustard (*Hirschfeldia incana*), cheeseweed, red-stemmed filaree, and long-beaked filaree, occur in the Non-Native Grassland community.

Landscape Coast Live Oak Trees

Areas mapped as Landscape Coast Live Oak Trees are planted with coast live oak (*Quercus agrifolia*). It appears that these landscape oak trees have been planted in the last few years and the trees range in age from sapling to three years. The majority of these areas are located within the islands associated with I-15/I-10 interchange and the SR-60 and I-15 interchange.

Ornamental/Landscape

Areas mapped as Ornamental/Landscape are dominated by landscape and ornamental plants commonly used in the urban setting and along freeways. Plants observed and mapped as Ornamental/Landscaping include acacia (*Acacia* sp.), eucalyptus (*Eucalyptus* spp.), date palm (*Phoenix canariensis*), Mexican fan palm (*Washingtonia robusta*), Brazilian pepper tree (*Schinus terebinthifolius*), bottlebrush tree (*Callistemon* sp.), and ornamental cherry (*Prunus* sp.). Some areas adjacent to the freeway in the northern portion of the project are planted with native species such as toyon (*Heteromeles arbutifolia*) and lemonadeberry (*Rhus integrifolia*).

Ruderal

Areas mapped as Ruderal are dominated by native and non-native annual and perennial plants, and are in areas where native communities have been removed and frequent disturbance typically occurs. The majority of areas mapped as Ruderal have a high percentage of bare ground and are dominated by plants such as earless crown-beard (*Verbesina encelioides*), tree tobacco (*Nicotiana glauca*), common horehound (*Marrubium vulgare*), castor bean (*Ricinus communis*), sand bur (*Ambrosia acanthicarpa*), winter vetch (*Vicia villosa*), totalote (*Centauria melitensis*), yellow star thistle (*Centauria solstitialis*), alfalfa (*Medicago sativa*), schismus (*Schismus barbatus*), common fiddleneck, western sunflower, summer mustard, red brome, rip-gut brome, red-stemmed filaree, long-beaked filaree, cheeseweed, and wild oats. Some scattered individuals of native scrub species, such as California sagebrush, California buckwheat, and deerweed, may be present in small numbers.

Wildlife

Thirty-six species of wildlife were detected within the BSA, the majority of which were birds, followed in species richness by mammals and reptiles. The NES contains a complete list of the wildlife detected during field studies.

Commonly detected birds included red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), European starling (*Sturnus vulgaris*), northern mockingbird (*Mimus polyglottos*), western meadowlark (*Sturnella neglecta*), Brewer's blackbird (*Euphagus cyanocephalus*), western kingbird (*Tyrannus verticalis*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*). All of these species are common to the region and have adapted at least in part to human-made habitats or disturbances.

Mammals detected included desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). These species are common in the region.

Reptiles detected included western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*). Both of these species are common to the region and readily found in human-altered landscapes. No amphibian species were observed.

Wildlife Corridors

Wildlife corridors are defined as habitat linkages 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 movement, as do engineered structures like culverts and flood-control channels. 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 (Beier and Loe 1992).

Historically, Etiwanda Creek and Day Creek in the BSA were likely to have supported substantial regional wildlife movement. In recent years, however, loss of habitat due to development on the floodplain and surrounding lowlands are likely to have greatly reduced the amount of regional movement throughout the BSA. The detrimental effects to wildlife movement from I-15 and the surrounding residential and commercial development have long been in place. Nevertheless, Etiwanda Creek and Day Creek do provide a long linear stretch of open space for regional wildlife movement and migration, including many species of water birds and small- to medium-sized mammals such as coyotes (*Canis latrans*), opossums (*Didelphis virginiana*), raccoons (*Procyon lotor*), and skunks (*Mephitis mephitis*). In addition, existing bridges provide a substantial undercrossing for any wildlife species in the area. Due to an increase in impediments to wildlife movement in the BSA, the remaining corridors between regional open habitats have become increasingly important.

Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP, a comprehensive regional Habitat Conservation Plan, was adopted in 2004. Major participants in the regional planning effort included, but were not limited to, Caltrans, CDFW, the USFWS, Riverside County, RCTC, local jurisdictions, and interested individuals and groups. The purpose of the MSHCP was to develop methods and procedures that provide for development while protecting environmental resources in the western Riverside County area over a 75-year period.

The MSHCP, among other things, provides impact mitigation for future Department projects on existing routes in the covered area of western Riverside County. Participation by the Department is intended to streamline the environmental process for future transportation projects in western Riverside County (e.g., through pre-mitigation) and save money over the long term.

Existing routes covered under the MSHCP include District 08-RIV I-10, I-15, SR-74, SR-79, SR-91, and I-215 at various segments (MSHCP Volume I, Section 7.3.5). The covered transportation routes require discretion by the Department with respect to design, construction, and operational decisions to minimize adverse impacts on existing habitat that may be affected by project activities. Where impacts cannot be avoided, the Department will make reasonable efforts to mitigate the impacts.

The southern portion of the project is located within Riverside County and is within the boundaries of the MSHCP. The project is a Covered Activity under the MSHCP. A literature review determined that this portion of the project occurs within the Eastvale and Jurupa Area Plans, Criteria Cells 35, 68, 118, and 168, Proposed Noncontiguous Habitat Block 1, Narrow Endemic Survey Area 7, Delhi Sands Flower-loving Fly Suitable Habitat Sub Unit 3, and Burrowing Owl Survey Area (**Figure 2-52**). The project does not occur within MSHCP-designated Amphibian Species Survey Areas, Mammal Species Survey Areas, Public/Quasi-Public Conserved Lands, or MSHCP linkages or cores.

2.3.1.3 Environmental Consequences

No Build Alternative

The No Build Alternative consists of the existing lane configuration for I-15. Under the No Build Alternative, with the exception of the RCTC I-15 Express Lanes Project (EA 0J0800), no other capital expenditures would be made to implement Express Lanes on I-15 within the project limits. Additional land areas would not be affected and existing and projected traffic congestion would not be alleviated.

Build Alternative

Vegetation Communities

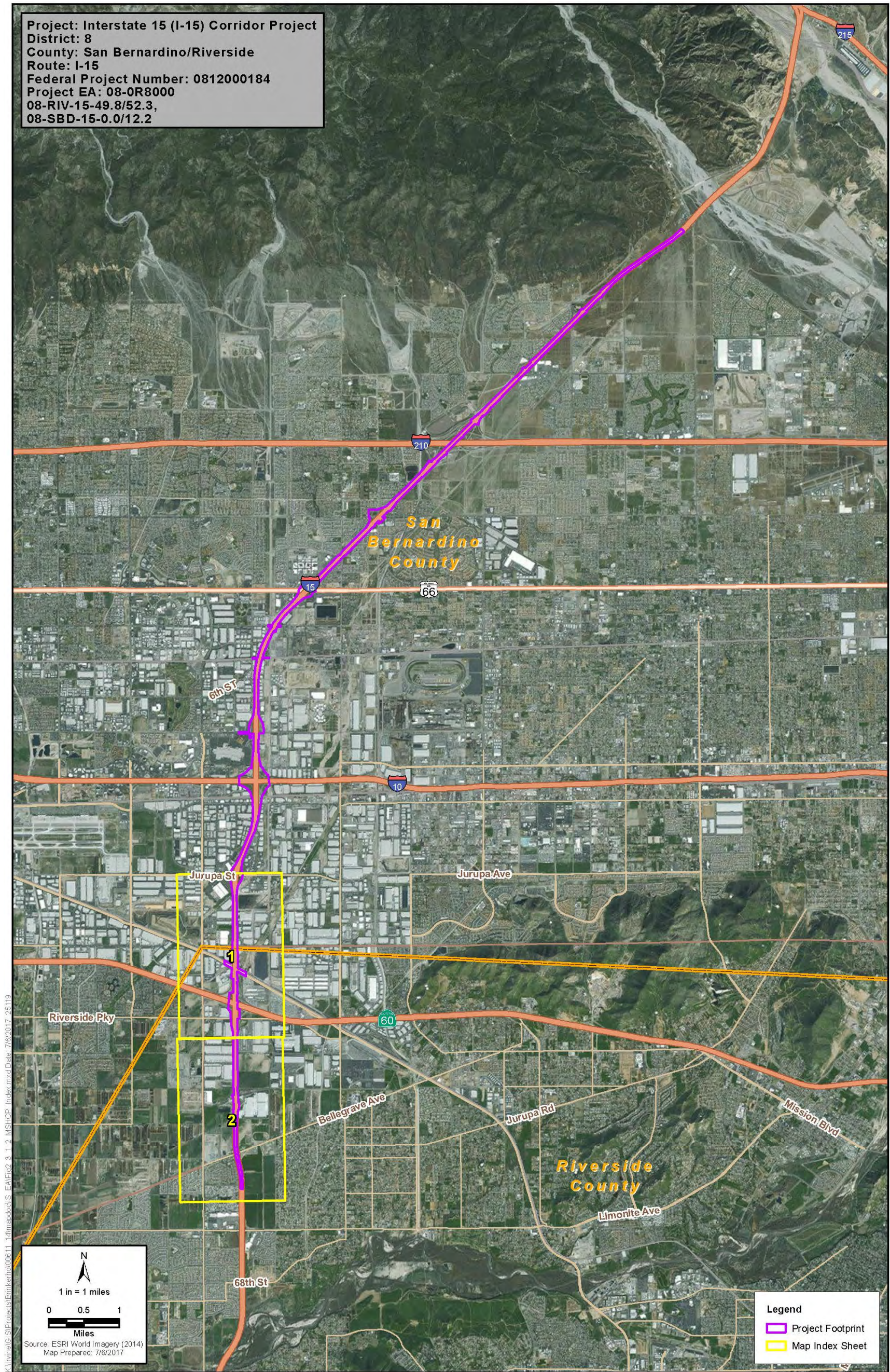
Temporary

Temporary direct impacts on Chamise Chaparral and California Sagebrush-California Buckwheat Scrub habitats may occur through disturbance or removal of existing vegetation during construction (**Table 2-90**). Temporary direct impacts may include incidental disturbances within construction areas, equipment staging areas, and temporary construction access routes. The temporary impacts on Chamise Chaparral and California Sagebrush-California Buckwheat Scrub are based on conservative preliminary design estimates to allow for flexibility of temporary construction work areas during the final design phase of the project and are generally identified as a worst-case scenario. The actual temporary impacts will likely be refined from those described in this IS/EA during the Plans, Specifications, and Estimate (PS&E) phase (**Figure 2-52**); however, given the proposed large temporary footprint, as well as the easy access and limited inside and outside widening, temporary impacts are not expected to increase. The project would not result in any temporary direct impacts on Arroyo Willow Thicket, Cattail Marsh, or Mulefat Thicket.

Table 2-90. Build Alternative Impacts on Natural Communities

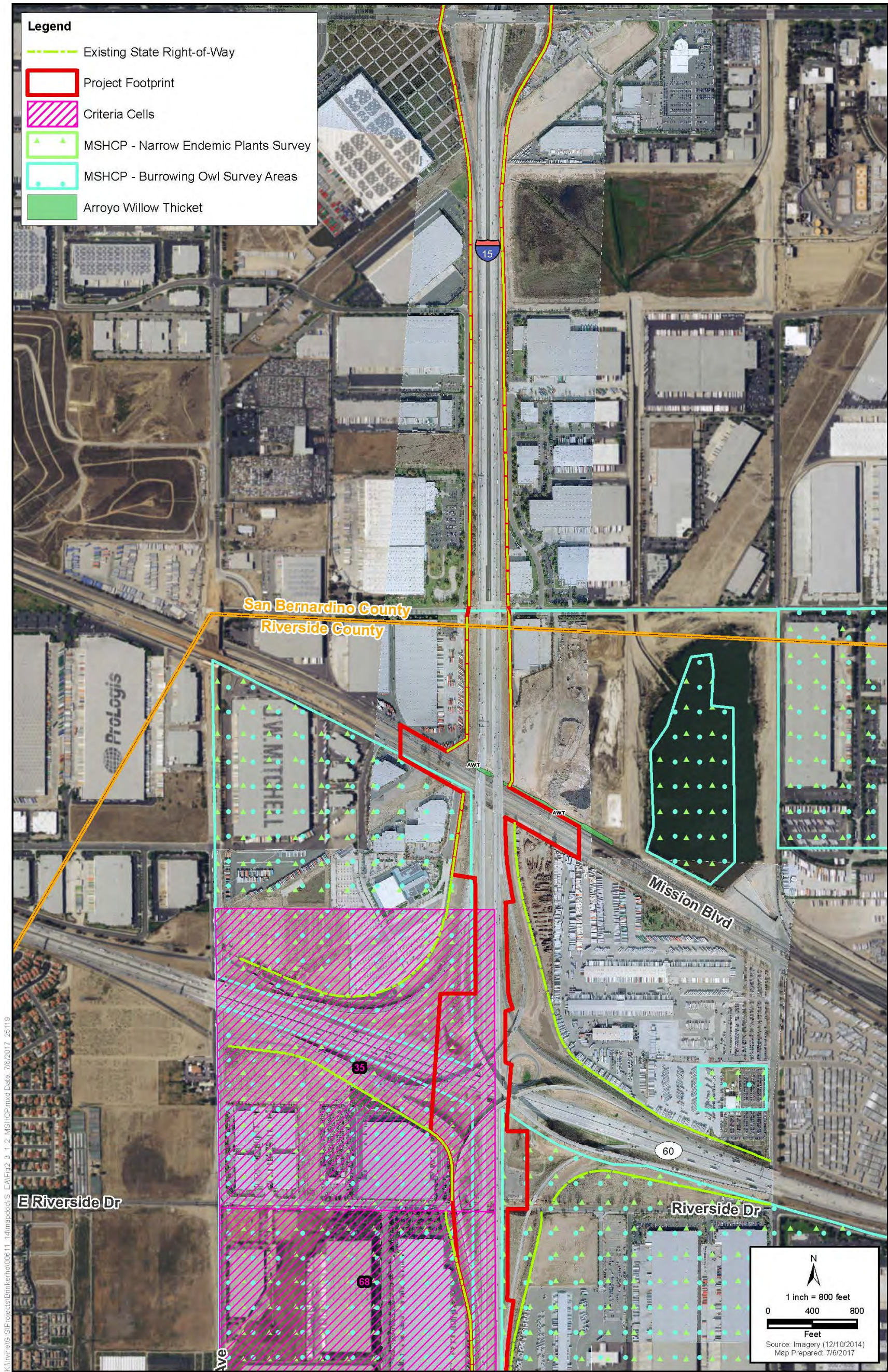
	Permanent Impact (acre)	Temporary Impact (acre)
Arroyo Willow Thicket	0.00	0.00
Cattail Marsh	0.00	0.00
California Sagebrush-California Buckwheat Scrub	0.31	8.30
California Sagebrush-California Buckwheat Scrub, Disturbed	3.09	11.24
Chamise Chaparral	0.00	0.00
Chamise Chaparral, Disturbed	0.00	0.34
Mulefat Thicket	0.00	0.00
Total	3.40	19.88

Figure 2-52. Project Limits within the Western Riverside County MSHCP Index



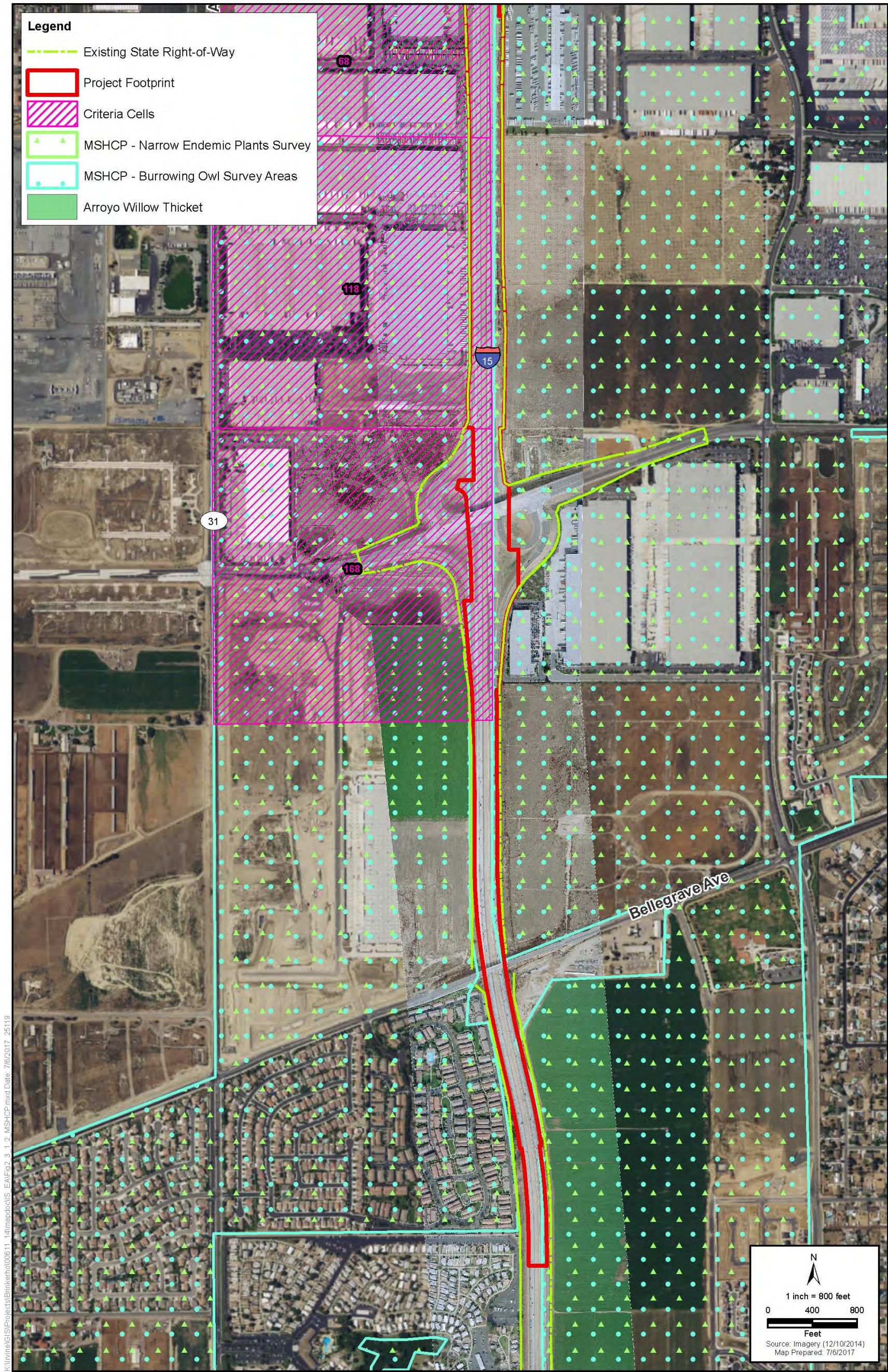
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Figure 2-52. Project Limits within the Western Riverside County MSHCP – Sheet 1



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Figure 2-52. Project Limits within the Western Riverside County MSHCP – Sheet 2



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Temporary indirect impacts as a result of project construction activities may occur on all five natural communities that are adjacent to the disturbance footprint. Temporary indirect impacts may include dust, increased fire risk, and sedimentation; however, these temporary impacts are expected to be greatly reduced by implementing the measures presented below. Establishing environmentally sensitive areas (ESAs) would prevent disturbance to natural communities that are adjacent to project limits of disturbance. Excluding vehicular and pedestrian access to natural communities would prevent damage to and destruction of native vegetation. Using silt barriers around ESAs and designating staging areas would protect native communities from erosion, accidental deposition of fill material, pollution, and runoff. Implementing fire suppression capabilities would reduce the risk of fires that may result from project activities. Dust control measures would protect against indirect dust impacts on native vegetation, such as reduced photosynthetic capabilities.

Permanent

The project would result in permanent direct impacts on California Sagebrush-California Buckwheat Scrub habitat through disturbance or removal of existing vegetation (**Table 2-90**). Permanent impacts may include the removal of existing vegetation and encroachment into the plant community. No direct impacts would occur on Chamise Chaparral, Arroyo Willow Thicket, Cattail Marsh, or Mulefat Thicket.

Wildlife Corridors

The I-15 corridor and surrounding development have greatly reduced the amount of wildlife habitat in the project area, but creeks and other drainages within the BSA have remained relatively open and passable and function as wildlife corridors. Within the BSA, Day Creek and Etiwanda Creek, as well as several constructed flood control channels, provide wildlife movement corridors with water and connections to open space between upslope and downslope portions of these drainages.

Temporary

The project would widen the roadway and associated bridges over these creeks, which could temporarily impact these corridors during construction. Temporary impacts on wildlife corridors could occur during construction due to the increased presence of equipment, structures, and construction personnel. Construction activities would reduce the passable area, which may temporarily deter wildlife movement. However, wildlife movement would be expected to return to preconstruction conditions once construction activities are complete.

Permanent

The project would not permanently affect existing wildlife movement through these corridors because no new barriers to wildlife movement would be created and none would be permanently reduced or eliminated by the project.

Multiple Species Habitat Conservation Plan

One MSHCP riparian/riverine resource, Arroyo Willow Thicket, occurs in the MSHCP portion of the BSA within a concrete-lined channel along the north side of Mission Boulevard (**Figure 2-52, Sheet 1**). The riparian/riverine habitat within the MSHCP portion of the BSA will be

avoided and no impacts are anticipated. Although some ephemeral drainages will be permanently or temporarily affected during project construction, none contain year-round water flow and all are unvegetated channels that were constructed in uplands. Thus, they do not provide biological functions or values to downstream habitats that provide values for MSHCP Covered Species. As such, no impacts on MSHCP riparian/riverine resources are expected as a result of the project and a Determination of Biological Equivalent or Superior Preservation (DBESP) will not be required per Section 6.1.2 of the MSHCP. No further action is needed.

There are no MSHCP linkages or cores within the BSA. One MSHCP habitat block, Proposed Noncontiguous Habitat Block 1, is located within the southern portion of the BSA on the west side of I-15. The original purpose of this habitat block was to support Delhi Sands flower-loving fly through the presence of Delhi sands. It was understood to be constrained by existing agricultural development at the time the MSHCP proposed it. Since approval of the MSHCP, development has continued to constrict the potential utility of Proposed Noncontiguous Habitat Block 1. It is now considered to have no potential to function as originally proposed and the portion of this habitat block that occurs within the BSA consists of developed and existing agricultural lands with no potential to support Delhi Sands flower-loving fly. As such, no impacts on MSHCP linkages, cores, or habitat blocks are expected as a result of the project and a DBESP will not be required per Section 3.0 of the MSHCP. No further action is needed.

Avoidance and minimization efforts for natural communities, which include MSHCP riparian/riverine resources, are listed below in section 2.3.1.4. Additionally, compliance with Caltrans 2015 Standard Specifications sections 13-4.03E(4) and 7-1.02M(2) will further contribute to avoidance and minimization efforts.

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

Natural Communities

The following natural communities-specific measures will be incorporated to avoid and minimize impacts:

- NC-1** Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around natural communities adjacent to the limits of disturbance to designate ESAs to be preserved. No additional fencing will be placed where San Bernardino kangaroo rat exclusion fencing is placed (see Section 2.3.5). No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Silt fence barriers will be installed at the ESA boundary, which is within Caltrans Right of Way, to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.
- NC-2** Hydrologic connectivity will be maintained within drainages during the duration of construction. Brush, debris material, mud, silt, or other pollutants from construction activities will not be placed within drainages and will not be allowed to enter a flowing stream.

- NC-3** The Permittee shall have the right to access and inspect the project site to ensure compliance with project approval conditions, including BMPs.

In addition, measures WET-1, WET-2, and WET-3 listed in section 2.3.2.4, will also help to reduce impacts on natural communities.

2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (EPA).

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (WoUS) 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 LEDPA to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for additional details.

2.3.2.2 Affected Environment

The primary sources used in the preparation of this section are the June 2017 *Wetland Delineation Report* and the January 2018 *Natural Environment Study Report* prepared for the project. The Wetland Delineation Report has been prepared for both an Approved Jurisdictional Delineation (AJD) and a Preliminary Jurisdictional Delineation (PJD). The Wetland Delineation Report, along with the final AJD and PJD, will be submitted to the USACE during the Design-Build phase of the project in conjunction with applying for permits related to Sections 401 and 404 of the CWA (see Section 2.3.2.3 for details).

Wetlands and Other Waters

Wetlands and other waters under the jurisdiction of the USACE, RWQCB, and CDFW were evaluated from January through July 2016 within the BSA, which consisted of a 100-foot buffer from the limits of disturbance. A total of 110 features were mapped within the BSA, including concrete channels, earthen channels, and wetland waters. Two of these features are identified as blue-line streams, including Etiwanda Creek and Day Creek. In total, 7.52 acres of USACE/RWQCB non-wetland WoUS, 0.12 acre of USACE/RWQCB wetlands, 17.61 acres of CDFW unvegetated streambed, and 0.34 acres of vegetated streambed were mapped within the

BSA. Additionally, approximately 4.99 acres of RWQCB non-wetland ditches were mapped (Table 2-91).

Table 2-91. Summary of Potential USACE, RWQCB, and CDFW Jurisdiction

Feature Type	USACE/RWQCB		RWQCB Only	CDFW	
	Non-Wetland WoUS/WoS (acres)	Wetland WoUS/WoS (acres)	Non-Wetland WoS (acres)	Unvegetated Streambed (acres)	Riparian (acres)
Concrete Channels	6.78	–	0.33	12.54	–
Earthen Channels	0.74	–	4.66	5.07	–
Wetlands	–	0.12	–	–	0.34
Total	7.52	0.12	4.99	17.61	0.34

Multiple Species Habitat Conservation Plan

The southern portion of the project is located within Riverside County and is within the boundaries of the Western Riverside County MSHCP. The MSHCP provides protection for all riparian/riverine resources and vernal pools that occur within the MSHCP area under Section 6.1.2. Riparian/riverine resources include any areas that contain riparian vegetation, as well as any unvegetated areas that have water flow year-round or only for portions of the year, connect to downstream riparian habitats, and provide biological functions or values to MSHCP Covered Species (MSHCP 2007). The MSHCP defines vernal pools as seasonal wetlands in depressional areas that contain soils specific to vernal pools (i.e., clay soils), vernal pool indicator species, and proper hydrology (MSHCP 2007). Under the MSHCP, all stock ponds, ephemeral pools, and other features must be assessed for providing suitable habitat to Riverside fairy shrimp, vernal pool fairy shrimp, and Santa Rosa fairy shrimp.

All projects occurring within the MSHCP area are required to take the following steps to determine whether riparian/riverine resources and vernal pools are present and will be affected by their project: (1) review biological documentation for their project site, (2) assess the project area, and (3) review project plans. If these sensitive habitats occur and project impacts are unavoidable, then DBESP must be prepared for the project and submitted to the appropriate wildlife agencies for a 60-day review and comment period (MSHCP 2007).

2.3.2.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not provide improvements on the I-15 within project limits, and as such, would not result in any impacts to wetlands or other waters. Existing and projected traffic congestion would not be alleviated.

Build Alternative

Wetlands and Other Waters

Temporary and permanent direct impacts on potentially jurisdictional wetlands and other waters would occur as a result of project construction, including the creation of express and auxiliary lanes, ramps, and storm drains, as well as temporary construction easements.

On July 17, 2018, an initial conference call was held between Caltrans and USACE to discuss what would be required to complete an AJD and PJD for the project. Information regarding potentially non-jurisdictional features under Sections 401 and 404 of the CWA was provided to the USACE and a request for both an AJD and PJD was submitted on July 25, 2018. A final AJD and PJD were issued by the USACE on August 3, 2018 and July 27, 2018, respectively.

The Wetland Delineation Report along with the final AJD and PJD, will be submitted to USACE, RWQCB, and CDFW during the Design-Build phase of the project to support obtaining a Nationwide Permit under CWA Section 404, a 401 Water Quality Certification, and Lake and Streambed Alteration Agreement, respectively (**Table 2-92**).

Table 2-92. Anticipated Project Permitting

Agency	Permit/Approval	Status
CDFW	1602 Agreement for Streambed Alteration	Notification to be submitted following Final Environmental Document (FED) adoption
RWQCB	Porter-Cologne and CWA Section 401 Water Quality Certification	Application to be submitted following FED adoption
USACE	CWA Section 404 Nationwide Permit	Notification to be submitted following FED adoption

Temporary

The project would result in temporary direct impacts on USACE/RWQCB non-wetland WoUS or Waters of the State (WoS), RWQCB non-wetland WoS, CDFW unvegetated streambed, and CDFW non-riparian vegetated bank (**Table 2-93**). No direct impacts would occur on USACE/RWQCB wetland WoUS or WoS.

Table 2-93. Anticipated Mitigation Credits for Impacts on Wetlands and Other Waters

Wetlands and Other Waters of the U.S. and State	Agency	Permanent Impact (acre)	Temporary Impact (acre)	Total Mitigation Credits to be Purchased (acre)*
Non-Wetland WoUS/WoS	USACE/RWQCB	—	0.35	0.35
Wetland WoUS/WoS	USACE/RWQCB	—	—	0.00
Non-Wetland WoS	RWQCB	0.63	0.93	2.82
Unvegetated Streambed	CDFW	0.01	1.77	1.80
Non-Riparian Vegetated Bank	CDFW	—	0.01	0.01
Total		0.64	3.06	4.98
*Permanent and temporary effects will be mitigated at a 3:1 and 1:1 ratio, respectively.				

Temporary indirect impacts on jurisdictional areas may include erosion, sedimentation, and pollution; however, these temporary impacts are expected to be greatly reduced by implementing the measures presented below. A Stormwater Pollution Prevention Plan (SWPPP) and a soil erosion and sedimentation plan will protect jurisdictional areas by minimizing erosion and

eliminating or controlling potential point and nonpoint pollution sources onsite during and following the project construction phase. Maintaining hydrologic connectivity would maintain the functionality of streams. Establishing ESAs and staging areas would prevent disturbance to jurisdictional areas that are adjacent to project limits of disturbance. Excluding vehicular and pedestrian access to jurisdictional areas would prevent damage to waterways. Using silt barriers around ESAs would protect jurisdictional areas from erosion, accidental deposition of fill material, pollution, and runoff.

Permanent

The project would result in permanent direct impacts on RWQCB non-wetland WoS and CDFW unvegetated streambed (**Table 2-93**). No direct impacts would occur on USACE/RWQCB non-wetland WoUS or WoS, USACE/RWQCB wetland WoUS or WoS, or CDFW non-riparian vegetated bank.

Compensation for permanent and temporary impacts on non-wetland Waters of the US and non-wetland Waters of the State may be provided by purchasing lands for preservation through an accredited mitigation bank. Permanent and temporary impacts will be mitigated at a minimum 3:1 and 1:1 ratio, respectively (Measure **WET-4**). Based on current design, it is anticipated that a total of 4.98 acres of mitigation credits are anticipated for project impacts on non-wetland Waters of the US and non-wetland Waters of the State (**Table 2-93**). The final mitigation credit will be determined during the Design-Build phase as part of the regulatory permits process.

Multiple Species Habitat Conservation Plan

One MSHCP riparian/riverine resource occurs in the MSHCP portion of the BSA. This resource will be avoided and no impacts are anticipated. No vernal pools occur within the BSA. Because no impacts on riparian/riverine resources or vernal pools will occur as a result of the project, a DBESP will not be required per Section 6.1.2 of the MSHCP. No further action is needed. MSHCP riparian/riverine resources are detailed in Section 2.3.1 above. Avoidance and minimization efforts for MSHCP riparian/riverine resources are discussed in Section 2.3.1.4 (NC-1 through NC-7).

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

Wetlands and Other Waters

The following measures will be incorporated to avoid and minimize impacts on wetlands and other waters:

- WET-1** Hydrologic connectivity will be maintained within drainages during the duration of construction. Brush, debris material, mud, silt, or other pollutants from construction activities will not be placed within drainages and will not be allowed to enter a flowing stream.
- WET-2** The limits of disturbance, including the upstream, downstream, and lateral extents on either side of any stream adjacent to the project, will be clearly defined and marked in the field. The designated biologist will review the limits of disturbance prior to initiation of construction activities (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). The upstream and downstream limits of disturbance plus the

lateral limits of disturbance on either side of the stream will be clearly defined and marked in the field, including ESAs fencing installed during construction to ensure avoidance of jurisdictional areas and riparian habitat. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.

WET-3 No grading or fill activity of any type will be permitted within ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material into wetlands and other waters.

WET-4 Project impacts on jurisdictional waters of the U.S. and waters of the state will be mitigated at a minimum 3:1 ratio for permanent impacts and a minimum 1:1 ratio for temporary impacts, at an approved mitigation bank, applicant sponsored mitigation area, or on site. A total of 4.98 acres of mitigation credits will be purchased for project impacts on non-wetland Waters of the US and non-wetland Waters of the State.

2.3.3 Plant Species

2.3.3.1 Regulatory Setting

The USFWS and 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 (Section 2.3.5) in this document for detailed information about these species.

This section of the document discusses all the 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 USC, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the CEQA, CA Public Resources Code, Sections 2100-21177.

Multiple Species Habitat Conservation Plan

The southern portion of the project is located within Riverside County and is within the boundaries of the Western Riverside County MSHCP. The project is a Covered Activity under the MSHCP. A literature review determined that this portion of the project occurs within the Eastvale and Jurupa Area Plans, Criteria Cells 35, 68, 118, and 168, Proposed Noncontiguous

Habitat Block 1, and Narrow Endemic Survey Area 7 (see **Figure 2-52** in Section 2.3.1). The project does not occur within MSHCP-designated Public/Quasi-Public Conserved Lands.

2.3.3.2 Affected Environment

The primary source used in the preparation of this section is the January 2018 *Natural Environment Study Report*.

A search of the California Natural Diversity Database, CNPS On-Line Electronic Inventory of Rare and Endangered Vascular Plants of California, and Western Riverside MSHCP Summary Report Generator was conducted to identify non-listed special-status plant species that could potentially occur within the project area (CDFW 2016, CNPS 2016, MSHCP 2016). Rare plant habitat evaluations and focused surveys for special-status plant species were performed from March through May 2016 within the Biological Study Area (BSA), which consisted of a 100-foot buffer from the limits of disturbance. Because rainfall during the 2015–2016 wet season (i.e., October–May) was below average (6.44 inches, or 62 percent of average) for the project area (NWS 2016), it is possible that some special-status plant species were not readily visible and were not detected during the 2016 surveys, but are in fact present. Consequently, an additional focused survey was conducted within the BSA on June 16, 2017 to determine the presence/absence of special-status plants. The survey area for the 2017 surveys was reduced from the original 2016 BSA to focus on the areas of the project that have a potential to support special-status plant species and included the area from Duncan Avenue to the northeastern terminus of the project alignment.

Special-Status Plants

A literature review determined that 77 non-listed special-status plant species may potentially occur within the BSA. Of these, one was observed within the BSA during the 2016 focused plant surveys: chaparral sand-verbena (*Abronia villosa* var. *aurita*). In addition, nine were determined to have suitable habitat present in the BSA: western spleenwort (*Asplenium vespertinum*), Catalina mariposa lily (*Calochortus catalinae*), Plummer's mariposa lily (*Calochortus plummerae*), peninsular spineflower (*Chorizanthe leptotheca*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), paniculate tarplant (*Deinandra paniculata*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), and Coulter's matilija poppy (*Romneya coulteri*) (**Table 2-94**). No additional special-status plant species were detected within the BSA during the 2017 focused plant survey.

Table 2-94. Non-Listed Special-Status Plant Species Potential to Occur

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Chaparral Sand- verbena (<i>Abronia villosa</i> var. <i>aurita</i>)	-/-1B.1/-	This annual herb is found in sandy soil within coastal scrub, mostly on broad alluvial fans and benches. Known to occur in northern Orange County, western Riverside County, San Bernardino County, San Diego County, and southern Imperial County. It blooms from January through August at elevations from 262 feet (ft.) to 5,248 ft. above mean sea level (amsl). It is threatened by flood control activities.	P	This species is present within the rare plant study area. Approximately 11 individuals were observed in the northwest quadrant of the I-15/SR-60 interchange during 2010 focused survey work for the Interstate 15 (I-15) Express Lanes Project (ICF 2014). One individual was observed in the same location during the 2016 rare plant focused surveys conducted for the project.
Western Spleenwort (<i>Asplenium vespertinum</i>)	-/-4.2/-	This perennial rhizomatous herb occurs within rocky areas in chaparral, cismontane woodland, and coastal scrub habitats at elevations ranging from 590 ft. to 3,280 ft. amsl. It blooms from February through June.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in 2016 or 2017.
Catalina Mariposa Lily (<i>Calochortus catalinae</i>)	-/-4.2/-	This perennial bulbiferous herb occurs within chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands at elevations ranging from 49 ft. to 2,297 ft. amsl. It blooms from February to June.	HP	Suitable habitat occurs within the rare plant study area associated with coastal sage scrub and Riversidean alluvial fan sage scrub areas located in the northern portion of the project. However, this species was not observed during focused surveys in 2016 or 2017.
Plummer's Mariposa Lily (<i>Calochortus plummerae</i>)	-/-4.2/ MSHCP(e)	This perennial bulbiferous herb is found on rocky and sandy areas with granitic or alluvial material in coastal sage scrub, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grasslands from 295 ft. to 5,280 ft. amsl. This species blooms from May through July.	HP	Suitable habitat occurs within the coastal sage scrub and Riversidean alluvial fan sage scrub areas located in the northern portion of the project. Several individuals were observed outside of the rare plant study area but focused surveys concluded that no individuals occur within the rare plant study area. MSHCP: None of the suitable habitat associated with the project is within the MSHCP portion of the project. Therefore, this species does not pose a MSHCP constraint to the project and no MSHCP-specific conservation requirements are necessary. No further action is required.

Table 2-94. Non-Listed Special-Status Plant Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Peninsular Spineflower (<i>Chorizanthe leptotheca</i>)	-/-4.2/ MSHCP	This annual herb is found in alluvial fan and granitic soils in chaparral, coastal scrub, and lower montane coniferous forest habitats at elevations ranging from 984 ft. to 6,234 ft. amsl. It blooms from May through August.	HP	Marginally suitable habitat is present within the northern portion of the rare plant study area where the appropriate soils and vegetation conditions occur. However, the suitable habitat within the rare plant study area is very disturbed and contains high amounts of non-native grasses. As such, the project is unlikely to support this species. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Parry's Spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	-/-1B.1/ MSHCP(e)	This annual herb is found in sandy or rocky openings within coastal scrub, cismontane woodland, valley and foothill grassland, and chaparral habitats at elevations ranging from 902 ft. to 4,002 ft. amsl. The blooming period for this species is from April through June.	HP	Marginally suitable habitat is present within the northern portion of the rare plant study area where the appropriate soils and vegetation conditions occur. However, the suitable habitat within the rare plant study area is very disturbed and contains high amounts of non-native grasses. As such, the project is unlikely to support this species. MSHCP: No suitable habitat for this species occurs within the MSHCP portion of the rare plant study area. In addition, focused surveys were performed in 2016 and 2017, as well as 2009 and 2010 for the I-15 Express Lanes Project that overlaps with the southern portion of the project, and this species was determined to be absent (ICF 2014). Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.
Paniculate Tarplant (<i>Deinandra paniculata</i>)	-/-4.2/-	This annual herb is found in coastal scrub, valley and foothill grassland, and vernal pool habitats, generally in vernal mesic and sometimes sandy conditions. It occurs at elevations ranging from 82 ft. to 3,084 ft. amsl and blooms from April through November.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in 2016 or 2017.

Table 2-94. Non-Listed Special-Status Plant Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Mesa Horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>)	-/-1B.1/-	This perennial herb grows in sandy and gravelly soils in chaparral, cismontane woodland, or coastal scrub at elevations from 230 ft. to 2,657 ft. amsl. It blooms from February through September.	HP	Suitable habitat is present within coastal scrub habitat in the northern portions of the rare plant study area. Occurrences were recorded in 1995 within 0.5 mi at the SR-210 interchange. However, this species was not observed during focused surveys in 2016 or 2017.
Robinson's Pepper-Grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	-/-4.3/-	This annual herb is found in dry soils in chaparral and coastal sage scrub openings at elevations ranging from sea level to 3,100 ft. amsl. Its blooming period is from January through July.	HP	Suitable habitat is present within the northern portions of the rare plant study area. However, this species was not observed during focused surveys in 2016 or 2017.
Coulter's Matilija Poppy (<i>Romneya coulteri</i>)	-/-4.2/ MSHCP	This perennial rhizomatous herb is found in chaparral and coastal scrub habitats, often in areas that have recently been burned. It occurs at elevations ranging from 65 ft. to 3,937 ft. amsl and blooms from March through July.	HP	Suitable habitat for this species is present within the rare plant study area. However, this species was not observed during focused surveys in 2016 or 2017. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
^a <u>Status Codes</u> Federal E = Federally listed; Endangered PE = Proposed Endangered T = Federally listed; Threatened FC = Federal Candidate for Listing FSC = Federal Species of Concern D = Delisted State T = State listed; Endangered E = State listed; Threatened SC = State Candidate for Listing R = Rare (Native Plant Protection Act) CSC = California Species of Special Concern FP = California Fully Protected Species		Multiple Species Habitat Conservation Plan (MSHCP) MSHCP = No additional action necessary MSHCP(a) = Surveys may be required as part of wetlands mapping MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area MSHCP(c) = Surveys may be required within locations shown on survey maps MSHCP(d) = Surveys may be required within Criteria Area MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species ^b <u>Habitat Presence/Absence Codes</u> P = The species is present. HP = Habitat is or may be present. The species may be present. HA = No habitat present and no further work needed. A = This species is absent.	California Rare Plant Ranks (CRPR) 1A = Plants presumed extinct in California 1B = Plants rare, threatened, or endangered in California and elsewhere 2 = Plants rare, threatened, or endangered in California, but more common elsewhere 3 = Plants about which we need more information 4 = Limited distribution (Watch List) 0.1 = Seriously endangered in California 0.2 = Fairly endangered in California 0.3 = Not very endangered in California CNDDDB = Vegetation communities classified as depleted	

Multiple Species Habitat Conservation Plan

Narrow Endemic Plant Species

The MSHCP portions of the project occur within the MSHCP Narrow Endemic Survey Area 7 (see **Figure 2-52** in Section 2.3.1); as such, habitat evaluations and focused surveys were performed. Narrow Endemic plant species listed for Survey Area 7 include San Diego ambrosia (*Ambrosia pumila*), San Miguel savory (*Clinopodium chandleri*), and Brand's phacelia (*Phacelia stellaris*). None of these species were observed during focused plant surveys in 2016 or 2017. In addition, these species were not detected during the 2009 or 2010 focused surveys for the I-15 Express Lanes Project, which overlaps with the Riverside County portion of the project.

Covered Plant Species

Three MSHCP covered plant species have the potential to occur in the BSA: Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), peninsular spineflower, and Coulter's matilija poppy. None of these species were detected during the 2016 and 2017 focused plant surveys.

Criteria Area and Species-Specific Objectives Plant Species

The MSHCP portion of the project does not occur within any Criteria Areas for plant species. Two plant species that have MSHCP species-specific conservation objectives that need to be met prior to being classified as a Covered Species have the potential to occur within the BSA: Plummer's mariposa lily and Parry's spineflower. No suitable habitat to support these species occurs within the MSHCP portion of the BSA and focused surveys were performed — these species were determined to be absent.

2.3.3.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not provide improvements on the I-15 within project limits, and as such, would not result in any impacts to non-listed special-status plant species. Existing and projected traffic congestion would not be alleviated.

Build Alternative

Special-Status Plants

Temporary

No non-listed special-status plant species were detected within the limits of disturbance; as such, the project is not expected to directly affect any individual plants, including chaparral sand-verbena. The project may, however, have temporary impacts on unoccupied potentially suitable habitat for non-listed special-status plant species through the alteration or loss of habitat (see Section 2.3.1 for impacts to natural communities). Unoccupied potentially suitable habitat would be affected by temporary construction activities required to provide adequate work space to construct the project. In addition, minor indirect impacts may occur to non-listed special-status plants occurring outside of the limits of disturbance and may consist of dust, erosion, introduction of invasive species on disturbed soils, and roadway runoff.

Permanent

The only non-listed special-status plant species observed within the BSA, chaparral sand-verbena, was detected outside of the limits of disturbance. As such, the project would have no permanent impacts on any individual plants. The project will, however, have direct permanent impacts on natural communities that could potentially support non-listed special-status plant species, although no special-status plants are present at this time (see Section 2.3.1 for impacts to natural communities).

Multiple Species Habitat Conservation Plan

No impacts on MSHCP Narrow Endemic plant species, MSHCP covered plant species, or MSHCP Criteria Area and Species-Specific Objectives Plant Species will occur as a result of the project. Consequently, a DBESP will not be required per Section 6.1.3 of the MSHCP and no MSHCP-specific conservation requirements are necessary. No further action is needed.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Special-Status Plants

Avoidance and minimization efforts for non-listed special-status plant species are the same as those described for the natural communities in Section 2.3.1.4 above (Measures NC-1 through NC-3).

2.3.4 Animal Species

2.3.4.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the 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 2.3.5 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 (NEPA)
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act (CEQA)
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.3.4.2 Affected Environment

The primary source used in the preparation of this section is the January 2018 *Natural Environment Study Report*

A search of the California Natural Diversity Database and Western Riverside MSHCP Summary Report Generator was conducted to identify non-listed special-status wildlife species that could potentially occur within the project area (CDFW 2016, MSHCP 2016). Habitat evaluations and focused surveys for special-status wildlife species were performed from January through May 2016 within the BSA. Buffer distances ranged by resource type and were applied to the BSA around the limits of disturbance as follows: (1) a 500-foot buffer was used for the bat habitat assessment; and (2) a 300-foot buffer was used for habitat suitability assessments for special-status wildlife species and focused surveys for burrowing owl (*Athene cunicularia*).

Special-Status Wildlife

A literature review determined that 37 non-listed special-status wildlife species may potentially occur within the BSA. Of these, one was observed to be present with the BSA: loggerhead shrike (*Lanius ludovicianus*). In addition, 20 were determined to have suitable habitat present in the BSA: silvery legless lizard (*Anniella pulchra pulchra*), Belding's orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), San Diego coast horned lizard (*Phrynosoma coronatum blainvillei*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (foraging only; *Aquila chrysaetos*), white-tailed kite (*Elanus leucurus*), burrowing owl, San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), southern grasshopper mouse (*Onychomys torridus ramona*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), American badger (*Taxidea taxus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego desert woodrat (*Neotoma lepida intermedia*), Townsend's big-eared bat (*Corynorhinus townsendii*), big free-tailed bat (*Nyctinomops macrotis*), pallid bat (*Antrozous pallidus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), California western mastiff bat (*Eumops perotis*), and western yellow bat (*Lasiurus xanthinus*) (**Table 2-95**).

Multiple Species Habitat Conservation Plan

The southern portion of the project is located within Riverside County and is within the boundaries of the Western Riverside County MSHCP. The project is a Covered Activity under the MSHCP. A literature review determined that this portion of the project occurs within the Eastvale and Jurupa Area Plans, Criteria Cells 35, 68, 118, and 168, Proposed Noncontiguous Habitat Block 1, Narrow Endemic Survey Area 7, Delhi Sands Flower-loving Fly Suitable Habitat Sub Unit 3, and Burrowing Owl Survey Area (see **Figure 2-51** in Section 2.3.1). The project does not occur within MSHCP-designated Amphibian Species Survey Areas, Mammal Species Survey Areas, or Public/Quasi-Public Conserved Lands.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
REPTILES				
Silvery Legless Lizard (<i>Anniella pulchra pulchra</i>)	-/CSC/-/-	Occurs in sandy or loose loamy soils with high moisture content under sparse vegetation. Found in chaparral, coastal dunes, and coastal scrub.	HP	The most recent records for this species are dated back to 1992; however, because the BSA passes into historical alluvial fan habitats in the northern portion of the project there is suitable habitat present.
Coastal Whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	-/CSC/-/ MSHCP	Occurs in a wide variety of habitats in coastal and inland valleys and foothills, including coastal sage scrub, sparse grassland, and riparian woodland, in areas with sparse vegetation and open areas. Found from Ventura County to Baja California.	HP	Suitable habitat is present in the coastal sage scrub habitat in the northern portion of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Belding's Orange-throated Whiptail (<i>Cnemidophorus hyperythrus beldingi</i>)	-/CSC/-/ MSHCP	Most California populations occur on or adjacent to floodplains or the terraces of streams, in or by open sage scrub and chaparral communities. The presence of perennial shrubs appears to be important, with the most strongly associated species being California Buckwheat (<i>Eriogonum fasciculatum</i>), Chamise (<i>Adenostoma fasciculatum</i>), White Sage (<i>Salvia apiana</i>), and Black Sage (<i>S. mellifera</i>). Termites are reported to constitute 57-95% of the diet, and foraging microsites are primarily under shrubs in leaf litter (Brattstrom 2000).	HP	Suitable habitat occurs within the sage scrub habitats in the northern portion of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
San Diego Coast Horned Lizard (<i>Phrynosoma coronatum blainvillei</i>)	-/CSC /-/ MSHCP	Found in arid and semi-arid climate conditions in chaparral and coastal sage scrub habitats, primarily below 2,000 ft. amsl in elevation. Critical factors are the presence of loose soils with a high sand fraction; an abundance of native ants or other insects, especially harvester ants (<i>Pogonomyrmex</i> spp.); and the availability of both sunny basking spots and dense cover for refuge.	HP	Suitable habitat occurs within coastal sage scrub and sandy habitats. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
BIRDS				
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	-/CSC/-/ MSHCP(e)	Widespread distribution throughout California. It uses predominantly open grassland with use of some other habitats including alluvial, playa, and sparse coastal sage scrub when sufficient amounts of intermittent grass or grassland habitat are available (Garrett and Dunn 1981).	HP	Suitable habitat is present in the northern end of the BSA within alluvial and coastal sage scrub habitats along the base of the foothills of the San Gabriel Mountains. MSHCP: No suitable habitat for this species occurs within the MSHCP portion of the BSA. In addition, this species was not observed during field surveys. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.
Golden Eagle (<i>Aquila chrysaetos</i>)	-/FP/-/MSHCP	Forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels (<i>Spermophilus beecheyi</i>) and rabbits, but will occasionally take larger prey, such as Mule Deer (<i>Odocoileus hemionus</i>) fawns. Nests on cliffs of all heights, and occasionally in large trees in open areas, in rugged, open habitats with canyons and escarpments. It is very sensitive to human disturbance, especially near nest sites.	Nesting: HA Foraging: HP	No suitable nesting habitat occurs within the BSA. This species would only occur as a winter migrant, potentially foraging within the northern portion of the BSA. MSHCP: This species is fully covered by the MSHCP and as such any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Burrowing Owl (<i>Athene cunicularia</i>)	-/CSC/-/ MSHCP(c)	Inhabits open, dry, nearly or quite level, grassland, prairie, desert floor, and shrubland habitats. Areas should be considered potential habitat if shrub cover is below 30% (CBOC 1997). In coastal southern California, a substantial fraction of birds are found in microhabitats highly altered by man, including flood control and irrigation basins, dikes, and banks, abandoned fields surrounded by agriculture, and road cuts and margins. There is a strong association between Burrowing Owls and burrowing mammals, especially ground squirrels (<i>Spermophilus</i> spp.); however, they will also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures (Haug et al. 1993).	HP	Suitable habitat is found within the study area. However, this species was not observed during focused surveys in 2016. MSHCP: The project occurs within the MSHCP Survey Area for this species. As such, MSHCP-specific surveys would be required.
White-tailed Kite (<i>Elanus leucurus</i>)	-/FP/-/MSHCP	Species hunts in open country. This is a strongly lowland species, apparently rare anywhere in California above 2,000 ft. amsl. Nests are flimsy and are located low in trees and large shrubs near foraging areas in savannahs and at edges between open habitat and woodland or forest areas. Its diet is largely restricted to small mammals such as voles and mice.	Nesting: HP Foraging: HP	This species would potentially nest and forage within the BSA. The closest occurrence record is from 2009 approximately 7.5 mi. to the southwest of the southern extent of the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	-/CSC/-/ MSHCP	Nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oasis scrub, and washes. Prefers open country for hunting, with perches for scanning and fairly dense shrubs and brush for nesting.	P	This species was observed within the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
MAMMALS				
Pallid Bat (<i>Antrozous pallidus</i>)	-/CSC/-/-	Occurs throughout Southern California from coast to mixed conifer forest, grasslands, shrublands, woodlands, and forest. Most common in open, dry habitats with rocky areas for roosting. Yearlong resident in most of its range. The species is not thought to migrate, so maternity colonies and winter roosts are expected to occur within the vicinity of one another. Roost sites include rock crevices, old buildings, bridges, caves, mines, and hollow trees.	HP	Both foraging and roosting habitat is present within the BSA, particularly in the northern portion.
Northwestern San Diego Pocket Mouse (<i>Chaetodipus fallax fallax</i>)	-/CSC/-/- MSHCP	Sandy herbaceous areas, usually in association with rocks and coarse gravel in southwest California; coastal and desert border areas in San Bernardino, Riverside, and San Diego counties. Elevation ranges from sea level to 6,000 ft. amsl. Vegetation community preferences include sage scrub, chamise-redshank chaparral, mixed chaparral, sage brush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland.	HP	Suitable habitat for this species occurs within the northern portion of the BSA. The nearest record for this species was reported in 1976 and is five mi. to the north of the north end of the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	-/CSC/-/-	Occurs in a wide variety of habitats, but prefers mesic areas. Roost habits are limited primarily to, and distribution is strongly associated with, caves and mines. Will also occasionally roost in hollow trees, buildings, bridges, and other human-made structures.	HP	Suitable foraging habitat is present in the BSA. Marginally suitable, limited roosting habitat occurs within the BSA.
California Western Mastiff Bat (<i>Eumops perotis californicus</i>)	-/CSC/-/-	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in the crevices in vertical cliff faces, high buildings, and tunnels and travels widely when foraging.	HP	Suitable foraging habitat is present in the BSA. No suitable roosting habitat is present within the BSA.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Western Yellow Bat (<i>Lasiurus xanthinus</i>)	-/CSC/-/-	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms.	HP	Suitable roosting and foraging habitat is present within the BSA, particularly in the palm trees throughout the study area. Species occurrence recorded within four mi. of the BSA.
San Diego Black-tailed Jackrabbit (<i>Lepus californicus bennettii</i>)	-/CSC/-/ MSHCP	Common throughout the state except at high elevations in herbaceous and desert shrub areas, sage scrub, grasslands, open chaparral, and woodland/forest areas. Relatively tolerant of disturbance.	HP	Suitable habitat for this species occurs within the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
San Diego Desert Woodrat (<i>Neotoma lepida intermedia</i>)	-/CSC/-/ MSHCP	Dry and/or sunny shrublands, especially (but not requiring) areas with cacti and abundant rocks and crevices. Does not require a source of drinking water. Sage scrub communities are frequently occupied.	HP	Suitable habitat for this species occurs within the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Pocketed Free-tailed Bat (<i>Nyctinomops (=Tadarida) femorosaccus</i>)	-/CSC/-/-	Found rarely in southwestern California; found in southeastern deserts of California, with portions of western Riverside County apparently on the periphery of their range. Species roost in high rock crevices, bridges, roofs, buildings, and cliffs, and forage primarily on large moths, especially over water. Habitats are arid.	HP	Potential roosting and foraging habitat is present.
Big Free-tailed Bat (<i>Nyctinomops macrotis</i>)	-/CSC/-/-	Occurs within low-lying arid areas of Southern California. Requires high crevices in cliffs and rock outcrops for roosting. Species feeds on large insects such as moths and grasshoppers.	HP	Potential foraging habitat is present. No suitable roosting habitat occurs within the BSA.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Southern Grasshopper Mouse (<i>Onychomys torridus ramona</i>)	-/CSC/-/-	Inhabits arid habitats, particularly with friable soils, and includes coastal scrub, mixed chaparral, sagebrush, low sage, bitterbrush, and grassland habitats. Occurs in arid portions of southwestern California and northwestern Baja California.	HP	Suitable habitat is present within the northern portion of the BSA.
Los Angeles Pocket Mouse (<i>Perognathus longimembris brevinasus</i>)	-/CSC/-/ MSHCP(c)	Habitat requirements for this subspecies are poorly known; it inhabits areas of open ground, prefers fine sandy soils (for burrowing), but is also found commonly on gravel washes and on stony soils, within brush and woodland habitats. It is rarely found on sites with a high cover of rocks.	HP	Suitable soils and habitat for this species occurs within the BSA. MSHCP: The study area lies outside of the MSHCP survey area for the species. Therefore, there is no MSHCP-specific survey requirement and no further action is necessary. Any potential impacts to the species would be fully mitigated by the MSHCP.

Table 2-95. Non-Listed Special-Status Wildlife Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
American Badger (<i>Taxidea taxus</i>)	-/CSC/-/-	Associated with large grassland and sparse sage scrub habitats. Occupies large dens/burrows and forages on small mammals (e.g., ground squirrels, rabbits), snakes, birds, and insects.	HP	Suitable habitat for this species occurs within the northern portion of the BSA.
^a <u>Status Codes</u> Federal E = Federally listed; Endangered PE = Proposed Endangered T = Federally listed; Threatened FC = Federal Candidate for Listing FSC = Federal Species of Concern D = Delisted State T = State listed; Endangered E = State listed; Threatened SC = State Candidate for Listing R = Rare (Native Plant Protection Act) CSC = California Species of Special Concern FP = California Fully Protected Species		Multiple Species Habitat Conservation Plan (MSHCP) MSHCP = No additional action necessary MSHCP(a) = Surveys may be required as part of wetlands mapping MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area MSHCP(c) = Surveys may be required within locations shown on survey maps MSHCP(d) = Surveys may be required within Criteria Area MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species ^b <u>Habitat Presence/Absence Codes</u> P = The species is present. HP = Habitat is or may be present. The species may be present. HA = No habitat present and no further work needed. A = This species is absent.	California Rare Plant Ranks (CRPR) 1A = Plants presumed extinct in California 1B = Plants rare, threatened, or endangered in California and elsewhere 2 = Plants rare, threatened, or endangered in California, but more common elsewhere 3 = Plants about which we need more information 4 = Limited distribution (Watch List) 0.1 = Seriously endangered in California 0.2 = Fairly endangered in California 0.3 = Not very endangered in California CNDDB = Vegetation communities classified as depleted	

Multiple Species Habitat Conservation Plan

MSHCP Burrowing Owl Survey Area

Under the MSHCP, a burrowing owl focused survey was required in the MSHCP Burrowing Owl Survey Area where suitable habitat was present. A total of 241 acres of MSHCP Burrowing Owl Survey Area occurs within the BSA (see **Figure 2-52** in Section 2.3.1), with potentially suitable habitat within Disturbed Chamise Chaparral, Disturbed California Buckwheat Scrub, Ruderal, Non-Native Grassland, Ornamental/Landscaping, Agriculture, and Disturbed vegetation communities/land cover types. The quality of potential habitat within the MSHCP Burrowing Owl Survey Area ranges from low to high and varies in the level of human disturbance. No sign of burrowing owl individuals were detected in the MSHCP Burrowing Owl Survey Area during the focused surveys.

Covered Wildlife Species

One MSHCP covered wildlife species, loggerhead shrike, was observed within the BSA. Ten additional MSHCP covered wildlife species have a potential to occur: coastal whiptail, Belding's orange-throated whiptail, San Diego coast horned lizard, golden eagle (foraging only), Swainson's hawk (foraging only; *Buteo swainsoni*), white-tailed kite, coastal California gnatcatcher (*Poliopitila californica californica*), northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Suitable habitat for these species is not supported within the MSHCP portion of the BSA and these species were not observed during biological surveys.

Criteria Area and Species-Specific Objectives Wildlife Species

The MSHCP portions of the project do not occur within any Criteria Areas for wildlife species. One MSHCP Species-Specific Objectives Wildlife Species, grasshopper sparrow, has the potential to occur within the BSA. However, no suitable habitat to support this species occurs within the MSHCP portion of the BSA and this species was not observed during biological surveys. Consequently, no MSHCP-specific conservation requirements are necessary and no further action is required.

Two wildlife species that have designated MSHCP mapped areas have the potential to occur within the BSA: Los Angeles pocket mouse and San Bernardino kangaroo rat (*Dipodomys merriami parvus*). However, although these species were included in the California Natural Diversity Database (CNDDB) list for the project, the BSA is outside of the MSHCP mapped areas for both species. In addition, no suitable habitat for these species occurs within the MSHCP portion of the BSA. As such, no further MSHCP action is required.

2.3.4.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not provide improvements on the I-15 within project limits, and as such, would not result in any impacts to non-listed special-status wildlife species. Existing and projected traffic congestion would not be alleviated.

Build Alternative

Special-Status Wildlife

Temporary

Although the project is limited to previously impacted portions of the existing state right of way, impacts on silvery legless lizard could occur where suitable habitat is present in loose loamy soils with high moisture content. These types of soils are limited in distribution within the BSA, with most soils consisting of sandy or cobble soils. In addition, there are no records of occurrence for this species in the BSA; the most recent record is from 1992, located outside the BSA (CDFW 2016). Temporary work areas could result in direct impacts on this species should it be present; however, there is a low probability that this species is present. Given that this species occurs across a relatively large range in California, the project is not anticipated to have a substantial effect on the population. Avoidance and minimization efforts listed below would ensure impacts on silvery legless lizard are minimal.

Suitable habitat for Belding's orange-throated whiptail, coastal whiptail, and San Diego coast horned lizard occurs within portions of the BSA, mainly in the northern portion of the project where limited development has occurred. Suitable habitat also occurs in linear stretches and patches along the alignment between the I-15 and adjacent developments, as well as in gore areas and interchanges. Records of these species also occur within the project vicinity. However, the northern portion of the project is limited to striping, signage, and utility trenching, and much of the project is limited to inside widening. Gore areas and interchanges are also isolated with very low probability of occupation due to surrounding heavily-used roadways. In addition, much of the BSA has received extensive disturbance from the I-15 and associated infrastructure and maintenance activities. As a result, both temporary and permanent impacts on these species would not be substantial because large populations are not expected to be present. Avoidance and minimization efforts listed below would ensure impacts on Belding's orange-throated whiptail, coastal whiptail, and San Diego coast horned lizard are minimal.

Grasshopper sparrow was not observed in the BSA, but suitable habitat for this species occurs within portions of the BSA, mainly in the northern portion of the project. However, the northern portion of the project is limited to striping, signage, and utility trenching, and would not permanently or temporarily affect this species. Any foraging individuals would avoid the work area. Therefore, substantial impacts on this species are not anticipated. Avoidance and minimization efforts listed below, including preconstruction nesting bird surveys and monitoring, would ensure impacts on grasshopper sparrow are minimal.

Low-quality suitable habitat for foraging golden eagle is present in limited portions of the BSA. No nesting habitat for this species is present. The project would not substantially reduce foraging habitat for this species given that the project would occur within the existing state right of way within developed and disturbed habitats with limited foraging capacity. Any foraging individuals would avoid the work area during construction. Therefore, substantial impacts on this species are not anticipated. Avoidance and minimization efforts listed below would ensure no impacts on golden eagle.

Nesting habitat for white-tailed kite is present in limited portions of the BSA where stands of trees are present adjacent to open areas. Less potential for nesting is present in the limits of disturbance because stands of trees mainly consist of low-density eucalyptus or ornamentals that are not typically used by this species for nesting. There could be temporary impacts on this species if nesting occurs within or adjacent to the BSA. However, avoidance and minimization efforts listed below, including preconstruction nesting bird surveys and monitoring, would ensure no impacts on nesting white-tailed kite.

Although no burrowing owl were observed within the BSA, suitable habitat is present and they could subsequently inhabit the BSA in areas that were previously determined to be unoccupied. Temporary disturbances could occur on individual burrowing owl should they move into the area prior to construction. However, avoidance and minimization efforts listed below, including preconstruction surveys, would ensure no impacts on burrowing owl.

Suitable habitat is present within the BSA for burrowing wildlife, including southern grasshopper mouse, Los Angeles pocket mouse, American badger, northwestern San Diego pocket mouse, and pallid San Diego pocket mouse, as well as nesting substrate for San Diego desert woodrat and cover for San Diego black-tailed jackrabbit. As a result, temporary and permanent impacts on these species could occur. Avoidance and minimization measures listed below would ensure impacts on special-status mammals are minimal.

Although no bat sign was detected during habitat assessments, project impacts on bat species that move into the area prior to construction may include temporary indirect disturbance, such as noise, vibration, dust, night lighting, and human encroachment from construction. In addition, construction could temporarily impede access to roost sites in the holes and crevices of bridges, culverts, and overhead structures.

Permanent

Suitable habitat is present within the BSA for the non-listed special-status reptile, bird, and mammal species described above. As a result, permanent impacts on these species could occur should they be present within the limits of disturbance during project construction. Avoidance and minimization measures listed below would ensure impacts on non-listed special-status wildlife are minimal. Preconstruction surveys would ensure that no nesting birds, burrowing owl, or roosting bats are harmed by implementing appropriate buffers and exclusion efforts if these species are found to be present. The flushing of any wildlife species (with the exception of nesting birds and bat maternity roosts) prior to vegetation removal and the use of fencing around the facility to prevent wildlife from entering construction areas will minimize potential wildlife mortality. Construction monitoring would ensure that BMPs are properly implemented, including proper trash storage and removal, maintenance of ESA fencing, and implementation of dust control measures.

A small portion of bat roosting habitat may be permanently affected. However, the widening and modification of bridges would increase future potential roosting habitat by providing more roosting crevices. As a result, the project is not expected to substantially affect bat roosting habitat.

Multiple Species Habitat Conservation Plan

No impacts on burrowing owl, MSHCP covered wildlife species, or MSHCP Criteria Area and Species-Specific Objectives Wildlife Species will occur as a result of the project. Consequently, a DBESP would not be required per Section 6.3.2 of the MSHCP and no MSHCP-specific conservation requirements are necessary. No further action is needed.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Special-Status Wildlife

The following non-listed special-status wildlife species specific measures would be incorporated to avoid and minimize impacts:

- ANI-1** In the event that vegetation clearing is necessary during the breeding season for passerine birds (i.e., February 1–September 1) or raptors (January 1–September 1), the designated biologist will conduct a preconstruction survey of construction areas and an appropriate buffer no more than 72 hours prior to construction to identify the locations of avian nests. An initial buffer of 500-feet for raptors and special-status species and 300-feet for all other avian species will be established around each nest site, with buffer reductions as needed based on the designated biologist’s professional opinion. To the extent feasible, no construction will take place within this buffer until the nest is no longer active. In the event that construction must occur within the buffer areas, the designated biologist, in coordination with the Department, will take steps to ensure construction activities do not disturb or disrupt nesting activities. If the designated biologist determines that construction activities are disturbing or disrupting nesting activities, then they will notify the Resident Engineer, who has the authority to halt construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, preventing idling of vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, or working in other areas until the young have fledged.
- ANI-2** A biologist will monitor construction within the vicinity of sensitive natural community areas prior to vegetation removal to ensure that wildlife species are not present and to ensure that vegetation removal, BMPs, and all avoidance and minimization measures are properly implemented. Preconstruction clearance surveys for sensitive wildlife species will be performed within 72 hours prior to construction. No nesting birds will be flushed during the nesting season. Special-status bats will not be flushed but will be protected as specified in measures ANI-9 through ANI-12. Burrowing wildlife will be relocated from the site of temporary or permanent impacts as feasible during preconstruction clearance surveys.
- ANI-3** A qualified biologist will conduct a training session for project and construction personnel (MSHCP Volume I, Section 7.5.3) prior to grading. The training will include a description of the species of concern and their habitats, the general provisions of the Endangered Species Acts (FESA and CESA) and the MSHCP, the need to adhere to the provisions of the acts and the MSHCP, the penalties associated with violating the provisions of the acts, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the

access routes to and from the project site boundaries within which the project activities must be accomplished (MSHCP Volume I, Appendix C).

- ANI-4** The qualified project biologist will monitor construction activities for the duration of the project to ensure that practicable measures are being employed and avoid incidental disturbance of habitat and species of concern outside the project footprint (MSHCP Volume I, Section 7.5.3). Special attention will be provided to ensure that the ESA fencing is maintained. Additionally, ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of BMPs.
- ANI-5** A qualified biologist will perform a detailed field review and document the location of raptor and/or corvid nests along with sign of colonial nesting birds within the limits of disturbance and adjacent lands. This field review should occur in late spring/early summer to provide the best results.
- ANI-6** Openings will be installed at regular intervals in the concrete “K”-rail barriers that will be placed in the existing fenced right-of-way in order to allow small wildlife to cross or escape roadways.
- ANI-7** A pre-construction survey for burrowing owl will be performed within 30 days prior to the start of construction activities. The survey area would be the project limits of disturbance and at least a 100-foot buffer.
- ANI-8** Should burrowing owl be detected within the BSA, avoidance and minimization measures will be developed in consultation with CDFW. Potential measures may include establishing an avoidance buffer around active burrows, eliminating potential unoccupied burrows, and/or passive relocation.
- ANI-9** Prior to the start of project construction, a daytime assessment will be conducted by a qualified bat biologist to reexamine structures that are suitable for bat use. If bat sign is observed at that time, then nighttime bat surveys will be conducted to confirm whether the structures with suitable habitat identified during the preliminary assessment are utilized by bats for day roosting and/or night roosting, to ascertain the level of bat foraging and roosting activity at each of these locations, and to perform exit counts to visually determine the approximate number of bats utilizing the roosts. Acoustic monitoring will also be used during these surveys to identify the bat species present and to determine an index of relative bat activity for that site on that specific evening.
- ANI-10** All work areas on existing bridges with potential bat roosting habitat will be cleared of all bats during the fall (i.e., September or October) outside of the maternity season (i.e., April 15–August 31) to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Exclusion efforts are to occur prior to the initiation of construction activities under the guidance and observation of a qualified bat biologist. Exclusionary devices should be used to exclude bats from directly affected work areas and avoid potential direct impacts. Such exclusion efforts must be continued to keep the structures free of bats throughout the duration of the construction activities or until construction at the

location is deemed complete and bat use is again acceptable. All bat exclusion techniques will be coordinated between the Department and the resource agencies, as applicable.

ANI-11 Prior to tree removal or trimming, large trees and snags should be examined by a qualified bat biologist to ensure that no roosting bats are present. Palm frond trimming, if necessary, should be conducted outside the maternity season (i.e., April 15–August 31) to avoid potential mortality to flightless young.

ANI-12 If maternity sites are identified during the preconstruction bat habitat suitability assessment, then no construction activities at that location will be allowed during the maternity season (i.e., April 15–August 31) unless a qualified bat biologist has determined the young have been weaned. If maternity sites are present, and it is anticipated that construction activities cannot be completed outside of the maternity season, then bat exclusion at maternity roost sites will be completed by CDFW and the qualified bat biologist either as soon as possible after the young have been weaned or outside of the maternity season or as otherwise approved by the qualified bat biologist in coordination with CDFW.

2.3.5 Threatened and Endangered Species

2.3.5.1 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 the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (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.

2.3.5.2 Affected Environment

The primary source used in preparing this section is the January 2018 *Natural Environment Study Report* prepared for the project.

A search of the CNDDDB and CNPS On-Line Electronic Inventory of Rare and Endangered Vascular Plants of California was conducted to identify federally and/or state listed threatened and/or endangered species that could potentially occur within the project area (CDFW 2016, CNPS 2016). On December 30, 2015, an official USFWS List of Proposed, Threatened, and Endangered Species, and Critical Habitats was obtained through the USFWS Information, Planning, and Conservation System. During the drafting of the IS/EA, over 180 days had elapsed since the original USFWS species list was obtained, so an updated official list was obtained on July 18, 2018 (Chapter 4; USFWS 2018).

A conference call was held on May 13, 2016 between USFWS, the Department, ICF, Parsons Brinckerhoff Engineering Services (PB), and VCS Environmental (VCS) to discuss the initial findings of Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) surveys, coastal California gnatcatcher (*Poliophtila californica californica*) surveys, San Bernardino kangaroo rat (*Dipodomys merriami parvus*) critical habitat and trapping, and listed fairy shrimp and to determine what further surveys would be required. The following personnel were present: John Taylor (USFWS), Karin Cleary-Rose (USFWS), Craig Wentworth (Department), Denesse Segura (Department), Essra Mostafavi (VCS), Julie Vandermost Beeman (VCS), Lynne Tilden (VCS), Michael Amling (ICF), Greg Hoisington (ICF), Zackry West (ICF), James Hickman (ICF), Ken Osborne (Osborne Biological Consulting), Lorraine E. Ahlquist (PB), Sam Tso (PB), and Vikrant Sanghai (PB). Based on initial survey findings, it was determined that protocol surveys for Delhi Sands flower-loving fly and coastal California gnatcatcher would be completed; that trapping for San Bernardino kangaroo rat was not required so long as the limits of disturbance remained outside of suitable habitat and barrier fencing around the project perimeter was erected; and that wet and dry season surveys for listed fairy shrimp were not required.

On September 2, 2016, Ken Osborne (Osborne Biological Consulting) emailed USFWS to request a deviation in Delhi Sands flower-loving fly survey protocol from 10 a.m. to 3 p.m. (2 p.m. is the protocol survey end time) due to cool, overcast conditions that delayed the start time.

On September 8, 2016, Geary Hund (USFWS) replied via email approving the extension of the survey stop time.

Habitat evaluations and focused surveys for listed species were performed from February through June 2016 within the BSA. Buffer distances ranged by resource type and were applied to the BSA around the limits of disturbance as follows: (1) a 300-foot buffer was used for focused surveys for Delhi Sands flower-loving fly and coastal California gnatcatcher; and (2) a 100-foot buffer was used for focused surveys for threatened and endangered plants and habitat assessments for vernal pools and fairy shrimp.

Rare plant habitat evaluations and focused surveys for Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) and slender-horned spineflower (*Dodecahema leptoceras*) were performed from March through May 2016 within the BSA. Because rainfall during the 2015–2016 wet season (i.e., October–May) was below average (6.44 inches, or 62 percent of average) for the project area (NWS 2016), it is possible that Santa Ana River woollystar and slender-horned spineflower were not readily visible and were not detected during the 2016 surveys, but are in fact present. Consequently, an additional focused survey was conducted within the BSA on June 16, 2017, to determine the presence/absence of these species. The survey area for the 2017 focused plant surveys was reduced from the original 2016 BSA to focus on the areas of the project that have a potential to support Santa Ana River woollystar and slender-horned spineflower and included the area from Duncan Avenue to the northeastern terminus of the project alignment.

A literature review determined that five listed plant and wildlife species may potentially occur within the BSA: Santa Ana River woollystar, slender-horned spineflower, Delhi Sands flower-loving fly, coastal California gnatcatcher, and San Bernardino kangaroo rat. In addition, because portions of the BSA occur within the MSHCP plan area, which provides protection for all fairy shrimp habitat, and depression features were identified within the BSA, vernal pool fairy shrimp (*Branchinecta lynchi*) and Riverside fairy shrimp (*Streptocephalus wooteni*), both federally-listed species, were included in the analysis as well. None of the seven-species assessed were observed within the BSA during field surveys (**Table 2-96**).

Santa Ana River Woollystar

Suitable habitat for Santa Ana River woollystar occurs in the northern portion of the BSA within Chamise Chaparral and California Buckwheat Scrub habitats associated with alluvial fans from the San Bernardino Mountains to the north. Botanical surveys conducted in March through late May 2016 and June 2017 during the blooming period for this species were negative. Several blooming individuals were observed at a reference population approximately 20 miles east of the limits of disturbance during the same time period. Because this species was known to be blooming in the area, is a conspicuous plant, and was not detected within the BSA during focused surveys, it is considered absent.

Table 2-96. Threatened and Endangered Species Potential to Occur

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
PLANTS				
San Diego Ambrosia (<i>Ambrosia pumila</i>)	E/-/1B.1/ MSHCP(b)	This perennial rhizomatous herb occurs in open floodplain terraces or in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse non-native grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas. San Diego ambrosia generally occurs at low elevations less than 1,600 ft. amsl in known Riverside County populations and less than 600 ft. amsl in San Diego County. It blooms from April through October.	HA	No suitable habitat exists within the rare plant study area. MSHCP: This is a Narrow Endemic Plant Species (Area 7) for the project. However, no suitable habitat occurs within the rare plant study area. Regardless, a reference population for the species was visited and focused surveys were conducted in 2016 and 2017 within the MSHCP portions of the project. No individuals were observed. In addition, focused surveys were performed in 2009 and 2010 for the I-15 Express Lanes Project, which overlaps with the southern portion of the project, and this species was determined to be absent (ICF, 2014). Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Braunton's Milkvetch (<i>Astragalus brauntonii</i>)	E/-/1B.1/-	This perennial herb can be found within chaparral, coastal scrub, and valley and foothill grasslands, usually on sandstone with carbonate layers. Often found within recently burned areas. Flowers emerge between January and August. Occurs at an elevation of 13 ft. to 2,099 ft. amsl.	HA	The site does not contain sandstone with carbonate layers or recently burned areas, so this species is unlikely to occur. Occurrences are found in the Santa Ana River basin from the Cleveland Forest west towards the Pacific Ocean. Therefore, this species is not expected to occur within the rare plant study area and does not pose a constraint to the project.
Thread-leaved Brodiaea (<i>Brodiaea filifolia</i>)	T/E/1B.1/ MSHCP(d)	This perennial bulbiferous herb is found in heavy soils (e.g., clay) in coastal sage scrub, chaparral, cismontane woodland, and vernal pools from 1,575 ft. to 4,000 ft. amsl. This species blooms from March through June. Within western Riverside County, found in southern Santa Ana Mountains, Santa Rosa Plateau, and alkali flats of the San Jacinto River flood plain and west of Hemet.	HA	The coastal sage scrub habitat within the rare plant study area is highly disturbed. In addition, the site does not contain suitable heavy clay soils, so this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: The study area lies outside the MSHCP survey area for the species (Criteria Area 3). In addition, focused surveys were performed in 2016 and 2017, as well as in 2009 and 2010 for the I-15 Express Lanes Project that overlaps with the southern portion of the project, and this species was determined to be absent (ICF, 2014). Therefore, there is no survey requirement and no further action is necessary.

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Slender-horned Spineflower (<i>Dodecahema leptoceras</i>)	E/E/1B.1/ MSHCP(b)	This annual herb is found on flood deposited fine sand terraces and washes in Riversidian alluvial fan sage scrub and is also associated with cismontane woodland and chaparral having suitable hydrology and fine sands. It is often associated with cryptogammic soils. It is known from elevations ranging from 656 ft. to 2,493 ft. amsl. Its blooming period ranges from April through June.	HP	Marginally suitable habitat is present at the northern end of the rare plant study area where appropriate soils and substrate are located. However, the habitat within the rare plant study area is very disturbed and contains high amounts of non-native grasses. In addition, this species was not observed during focused surveys in 2016 or 2017. Because this species was known to be blooming in the area in 2017, has a limited extent of known populations, and was not detected within the BSA during focused surveys, it is considered absent. MSHCP: This species is a Narrow Endemic Plant Species. The study area lies outside of the MSHCP survey area for the species (Areas 1 and 5). In addition, focused surveys were performed in 2016, as well as in 2009 and 2010 for the I-15 Express Lanes Project that overlaps with the southern portion of the project, and the species was found to be absent. Therefore, there is no MSHCP-specific survey requirement and no further action is necessary.
Santa Ana River Woollystar (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>)	E/E/1B.1/ MSHCP	A perennial herb known from a single extended but heavily fragmented population in Riverside and San Bernardino counties; it formerly extended into Orange County. An inhabitant of alluvial fan sage scrub in sandy to gravelly soils that can be found at elevations ranging from 450 ft. to 2,000 ft. amsl. It typically blooms from June through August.	HP	Suitable habitat occurs within the northern portion of the rare plant study area associated with alluvial fan sage scrub. However, this species was not observed during focused surveys in 2016 or 2017. Because this species was known to be blooming in the area, is a conspicuous plant, and was not detected within the BSA during focused surveys, it is considered absent. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
INVERTEBRATES				
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	T/-/- MSHCP(a)	Inhabits cool-water vernal pools and vernal pool-like habitats. Endemic to California and the Agate Desert of southern Oregon.	HA	<p>No suitable habitat is present within the BSA. Although there are depressional features within the study area, they were determined not to be suitable habitat based on the short duration of ponding, the history of disturbance for the features mapped, and the lack of occurrence records for this species within the project area. Therefore, this species is not expected to occur.</p> <p>MSHCP: This species is a Vernal Pool and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.</p>
Delhi Sands Flower-loving Fly (<i>Rhaphiomidas terminatus abdominalis</i>)	E/-/-MSHCP	Found within 12 distinct locations within the cities of Colton, Rialto, and Fontana. Only found in areas with Delhi sands and is typically associated with the following native plants: California Buckwheat (<i>Eriogonum fasciculatum</i>), Telegraph Plant (<i>Heterotheca grandiflora</i>), and California Croton (<i>Croton californica</i>). Low tolerance to disturbances.	HP	<p>Suitable habitat is present within the Delhi sands areas of the BSA. However, much of the habitat is disturbed and developed and occurs in narrow linear distributions. It is also in close proximity to constant and active freeway traffic. Two consecutive years of focused surveys were conducted in 2016 and 2017, as well as in 2009 and 2010 for the I-15 Express Lanes Project that overlaps with the southern portion of the project. All survey efforts found this species to be absent.</p> <p>MSHCP: The project occurs within the MSHCP Delhi Sands Survey Area Sub Unit 3 for this species. As such, MSHCP-specific surveys would be required.</p>

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Riverside Fairy Shrimp (<i>Streptocephalus wooteni</i>)	E/-/- MSHCP(a)	Occurs in tectonic swales and earth slump basins in grassland and coastal sage scrub habitats. Inhabits seasonally astatic pools filled by winter/spring rains and hatches in warm water later in the season. Endemic to west Riverside, Orange, and San Diego counties.	HA	No suitable habitat is present within the BSA. Although there are depressional features within the study area, they were determined not to be suitable habitat based on the short duration of ponding, the history of disturbance for the features mapped, and the lack of occurrence records for this species within the project area. Therefore, this species is not expected to occur. MSHCP: This species is a Vernal Pool and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.
FISH				
Santa Ana Sucker (<i>Catostomus santaanae</i>)	T/CSC/-/ MSHCP	Occurs in stream channels with a mosaic of loose sand, gravel, cobble, and boulder substrates in riffles, runs, pools, and shallow sandy stream margins with cool, running water. Historical range included the Los Angeles, San Gabriel, and Santa Ana river drainage systems in Southern California. An introduced population also occurs in the Santa Clara River drainage system.	HA	No suitable habitat occurs within the BSA. The only drainages within the study area consist of modified, concrete-lined channels. MSHCP: This species is fully covered under the MSHCP. No MSHCP-specific surveys are required for this species.
AMPHIBIANS				
Arroyo Toad (<i>Bufo/Anaxyrus californicus</i>)	E/CSC/-/ MSHCP(c)	Found in rivers with willows, cottonwoods, and sycamores. This species prefers sandy/gravelly areas in drier parts of its range near washes or intermittent streams with clear standing water that is required for egg deposition.	HA	No suitable streams are present in the BSA. The only drainages within the study area consist of modified, concrete-lined channels that lack mature riparian woodland habitats. The nearest occurrence record is 5 mi to the north in Cajon Pass, where extensive riparian and wash habitats occur. MSHCP: The project occurs outside of the MSHCP survey area for this species. No MSHCP-specific surveys are required and no further action is necessary.

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Southern Mountain Yellow-legged Frog (<i>Rana muscosa</i>)	E/E/-/ MSHCP(c)	Endemic to California. Inhabits lakes, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains and Transverse Ranges from 1,210 ft. to 12,010 ft. amsl elevation. Occurs in open stream and lake edges; a gentle slope up to a depth of 2-3 inches seems to be preferred. Rarely occurs where predatory fishes have been introduced. Always encountered within a few feet of water.	HA	Species habitat requirements do not exist within the BSA. The only drainages within the study area consist of modified, concrete-lined channels. The nearest occurrence record is within 4 mi northwest of the BSA. All nearest records are assumed extirpated. MSHCP: The project occurs outside of the MSHCP survey area for this species. No MSHCP-specific surveys are required and no further action is necessary.
BIRDS				
Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	E/E/-/ MSHCP(a)	Highly restricted distribution in Southern California as a breeder. It occupies extensive riparian forests, wet meadows, and lower montane riparian habitats primarily below 4,000 ft. amsl. Occurs in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows (<i>Salix</i> spp.), <i>Baccharis</i> spp., Arrowweed (<i>Pluchea</i> spp.), buttonbush (<i>Cephalanthus</i> spp.), tamarisk (<i>Tamarix</i> spp.) Russian olive (<i>Eleagnus</i> spp.), or other plants are present, often with a scattered overstory of cottonwood (<i>Populus</i> spp.).	HA	Suitable habitat does not exist within the BSA. The riparian habitat onsite is small, not a mature woodland, is surrounded by development, and is too isolated to support this species. The closest suitable riparian habitat exists within the Santa Ana River and Prado Reservoir approximately 6 mi southwest of the southern end of the BSA. MSHCP: This species is a Riparian/Riverine Area and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.
California Condor (<i>Gymnogyps californianus</i>)	E/E/-/-	Occurs in semi-arid mountainous areas in California, including the southern Sierra Nevada, Tehachapi Mountains, Transverse Ranges, and the Coast Ranges from Santa Clara County south to Los Angeles County. Forages in open habitats, including grasslands, foothill chaparral, and savannahs, and feeds solely on carrion. Nests and roosts in cliffs on ledges and cavities and in large trees and snags.	HA	Suitable habitat is absent from the BSA. Mountainous areas for roosting, wide open native habitats for foraging, and large sources of carrion are not found in the BSA.

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Coastal California Gnatcatcher (<i>Polioptila californica californica</i>)	T/CSC/-/ MSHCP	Year-round obligate, permanent resident of coastal sage scrub vegetation on mesas, arid hillsides, and in washes. Nests almost exclusively in California sagebrush. Occurs in low-lying foothills and valleys in cismontane southwestern California and Baja California.	HP	Low-quality habitat occurs within coastal sage scrub in the northern portion of the BSA. However, this species was not observed during focused surveys in 2016. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Least Bell's Vireo (<i>Vireo bellii pusillus</i>)	E/E/-/ MSHCP(a)	Found as a summer resident of southern California where it inhabits low riparian growth in the vicinity of water or in dry river bottoms below 2,000 ft. amsl. Species selects dense vegetation low in riparian zones for nesting; most frequently located in riparian stands between 5 and 10 years old; when mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows, as well as other plant species (Goldwasser 1981).	HA	Suitable habitat does not exist within the BSA. The riparian habitat onsite is small, not a mature woodland, is surrounded by development, and is too isolated to support this species. The closest suitable riparian habitat exists within the Santa Ana River and Prado Reservoir approximately 6 mi southwest of the southern end of the BSA. MSHCP: This species is a Riparian/Riverine Area and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.
MAMMALS				
San Bernardino Merriam's Kangaroo Rat (<i>Dipodomys merriami parvus</i>)	E/CSC/-/ MSHCP(c)	Prefers soils of sandy loam, occasionally to sandy gravel, in open to moderately shrubby habitats, especially intermediate seral stages of alluvial fan sage scrub up to 1,970 ft. amsl from active channels.	HP, CH	Designated suitable habitat and critical habitat for this species is present within the northern portion of the BSA. MSHCP: The study area lies outside of the MSHCP survey area for the species. Therefore, there is no MSHCP-specific survey requirement and no further action is necessary. Any potential impacts to the species would be fully mitigated by the MSHCP.

Table 2-96. Threatened and Endangered Species Potential to Occur (continued)

Common Name/ Scientific Name	Status Federal/ State/ CNPS/ MSHCP ^a	Species Requirements	Specific Habitat Present/ Absent ^b	Rationale
Stephens' Kangaroo Rat (<i>Dipodomys stephensi</i>)	E/T/-/MSHCP	Found almost exclusively in open grasslands or sparse shrublands with cover of less than 50% during the summer. Avoids dense grasses and is more likely to inhabit areas where the annual forbs disarticulate in the summer and leave more open areas. Typically found in sandy and sandy loam soils with low clay to gravel content for burrowing; will sometimes utilize the burrows of other mammals. Tends to avoid rocky soils. In general, the highest abundances of species occur on gentle slopes less than 15%.	HA	No suitable habitat is present within the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
^a <u>Status Codes</u> Federal E = Federally listed; Endangered PE = Proposed Endangered T = Federally listed; Threatened FC = Federal Candidate for Listing FSC = Federal Species of Concern D = Delisted State T = State listed; Endangered E = State listed; Threatened SC = State Candidate for Listing R = Rare (Native Plant Protection Act) CSC = California Species of Special Concern FP = California Fully Protected Species		Multiple Species Habitat Conservation Plan (MSHCP) MSHCP = No additional action necessary MSHCP(a) = Surveys may be required as part of wetlands mapping MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area MSHCP(c) = Surveys may be required within locations shown on survey maps MSHCP(d) = Surveys may be required within Criteria Area MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species ^b <u>Habitat Presence/Absence Codes</u> P = The species is present. HP = Habitat is or may be present. The species may be present. HA = No habitat present and no further work needed. A = This species is absent.	California Rare Plant Ranks (CRPR) 1A = Plants presumed extinct in California 1B = Plants rare, threatened, or endangered in California and elsewhere 2 = Plants rare, threatened, or endangered in California, but more common elsewhere 3 = Plants about which we need more information 4 = Limited distribution (Watch List) 0.1 = Seriously endangered in California 0.2 = Fairly endangered in California 0.3 = Not very endangered in California CNDDDB = Vegetation communities classified as depleted	

Slender-horned Spineflower

Botanical surveys conducted in March through late May 2016 and June 2017 during the blooming period for slender-horned spineflower were negative. Marginally suitable habitat for this species is present in the northern portion of the BSA within Chamise Chaparral habitats where appropriate soils and substrate are located. However, the habitat within this area is very disturbed and contains high amounts of non-native grasses. As such, the project is unlikely to support slender-horned spineflower, particularly due to the very limited extent of known populations in the region and the very low likelihood of an unknown population in the BSA. A reference population for slender-horned spineflower located approximately 19 miles east of the limits of disturbance was visited on June 2, 2016, and May 4, 2017. This species was not detected during the 2016 visit, but was observed blooming during the 2017 visit. Because slender-horned spineflower was known to be blooming in the area in 2017, has a limited extent of known populations, and was not detected during focused surveys, it is considered absent from the BSA.

Delhi Sands Flower-loving Fly

A habitat evaluation for Delhi Sands flower-loving fly was performed in March 2016. More than 180 acres of undeveloped areas are mapped with Delhi sand soils within the BSA. Of this acreage, approximately 144.63 acres of the BSA were identified as having habitat conditions suitable for this species (94.99 acres within the limits of disturbance and an additional 49.64 acres within the 100-foot buffer area). Conditions unsuitable for Delhi Sands flower-loving fly were found on 36.20 acres (**Figure 2-53**).

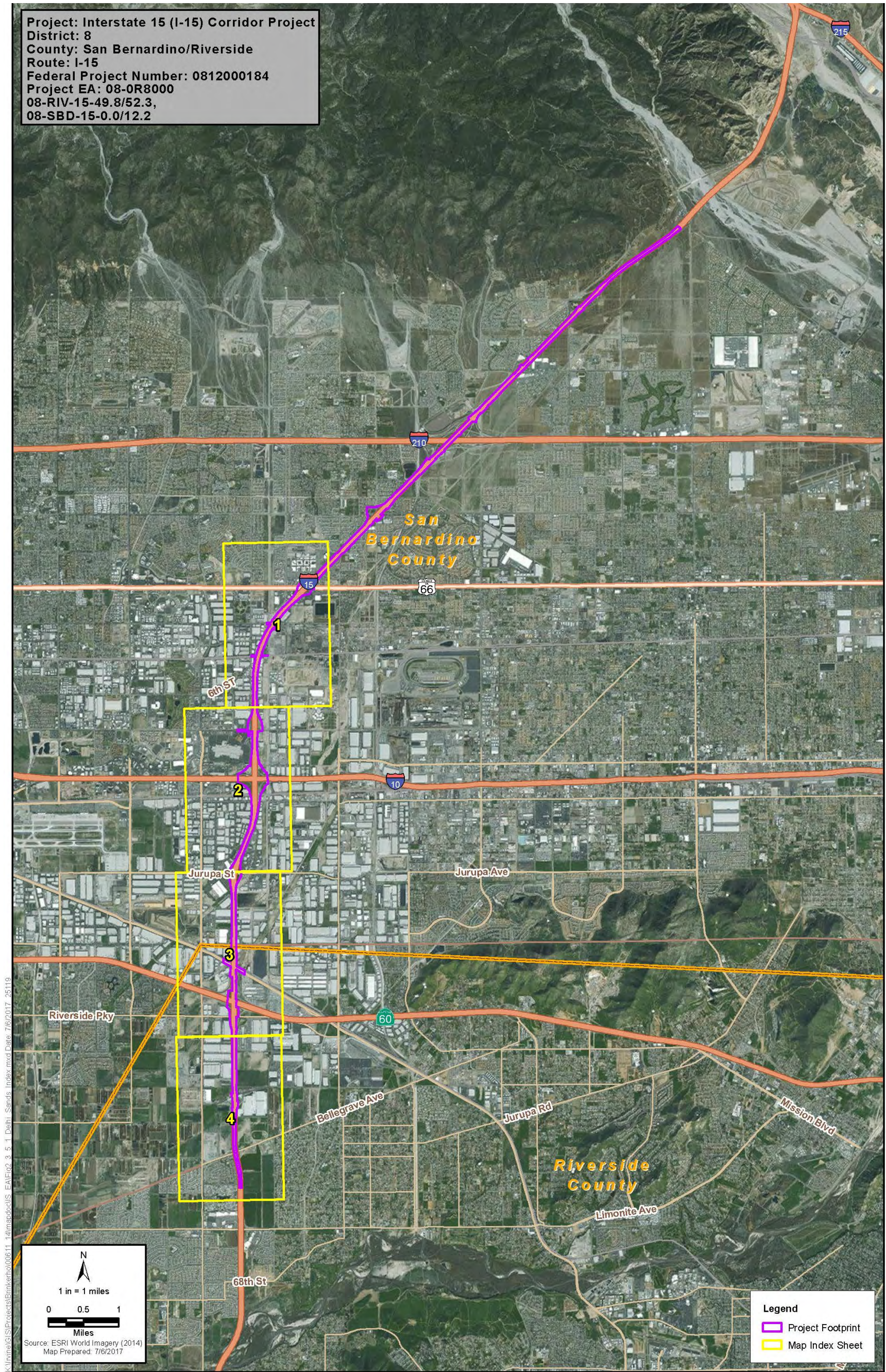
Survey results for Delhi Sands flower-loving fly were negative for all survey areas investigated for the project for both the 2016 and 2017 field seasons. In addition, focused surveys conducted in 2009 and 2010 for the I-15 Express Lanes Project, which overlaps the southern portion of the BSA, determined that the Delhi sands were unoccupied by this species. As such, Delhi Sands flower-loving fly is considered absent from the BSA.

Listed Fairy Shrimp

Based on the results of the mapping and monitoring there are 25 seasonal depressional features within the BSA that pond following rain events (**Figure 2-54**). Some of the features are natural ponding areas, such as low spots and road ruts that collect water either from the immediate watershed area or through the existing water table, whereas other features are basins designed to collect and manage stormflows from adjacent freeway infrastructure and other developed areas.

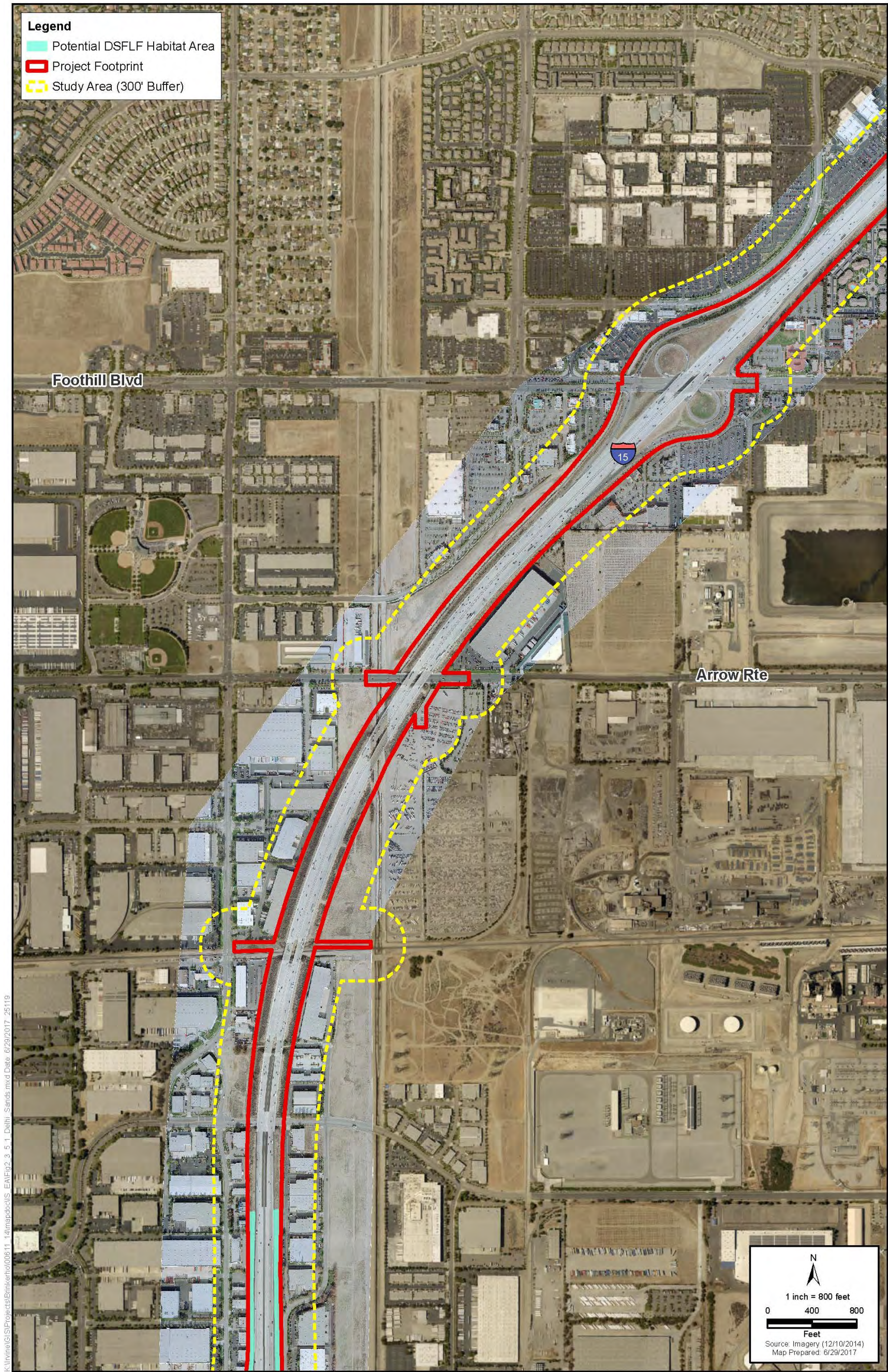
The results of the monitoring show that no features within the BSA held water for longer than 12 days during the monitoring period. Due to the short duration of ponding for the depressional features within the BSA, the history of disturbance for the features mapped, combined with the lack of fairy shrimp reported in a 19-mile radius of the limits of disturbance and lack of vernal pool indicator species, it was determined that none of the mapped features have the potential to support special-status fairy shrimp. Consequently, vernal pool fairy shrimp and Riverside fairy shrimp are considered absent from the BSA and no further habitat assessment or USFWS-protocol dry- or wet-season sampling focused surveys are required. No critical habitat for vernal pool fairy shrimp or Riverside fairy shrimp occurs within the BSA.

Figure 2-53. Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment Index



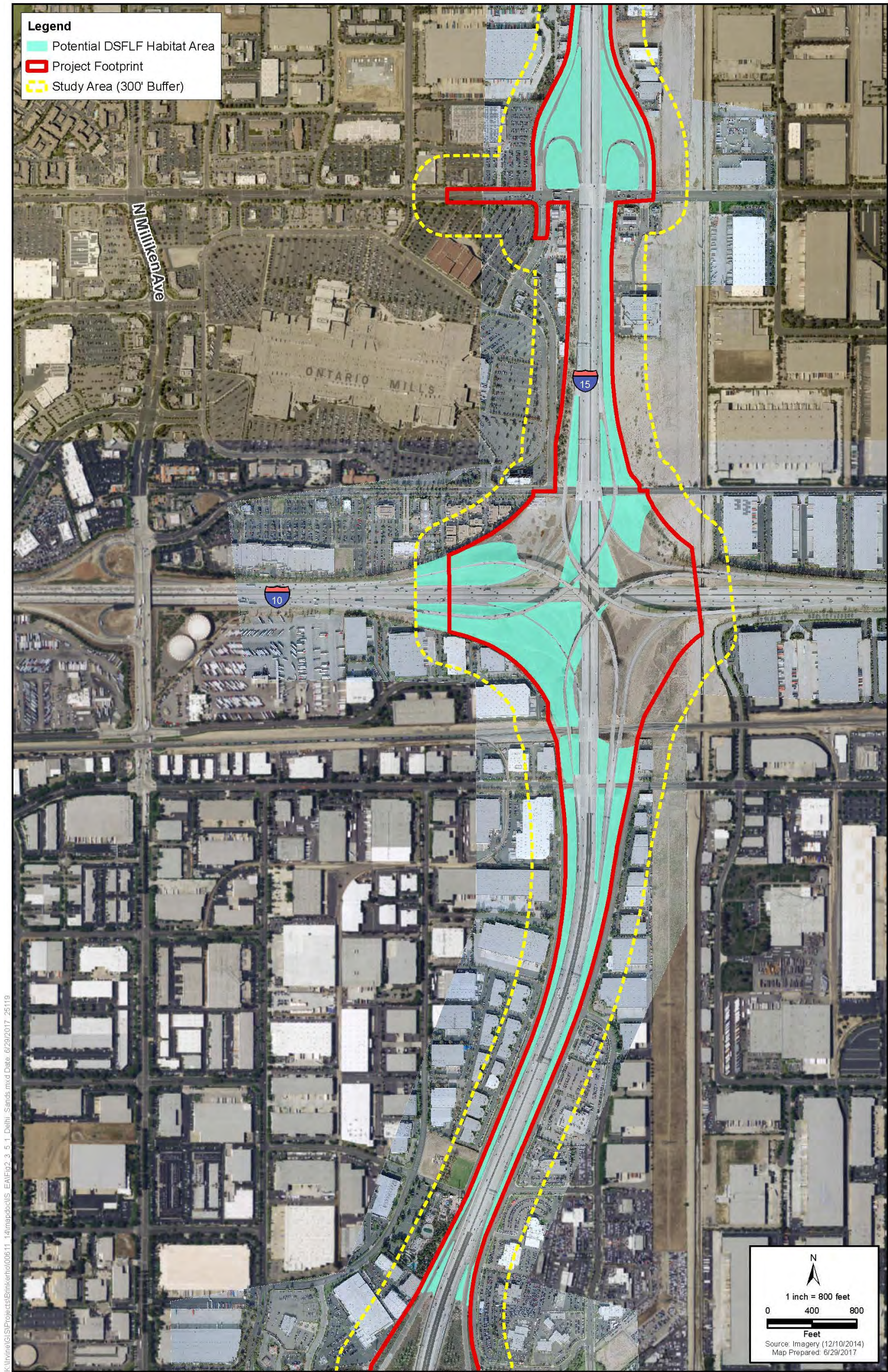
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Figure 2-53. Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment – Sheet 1



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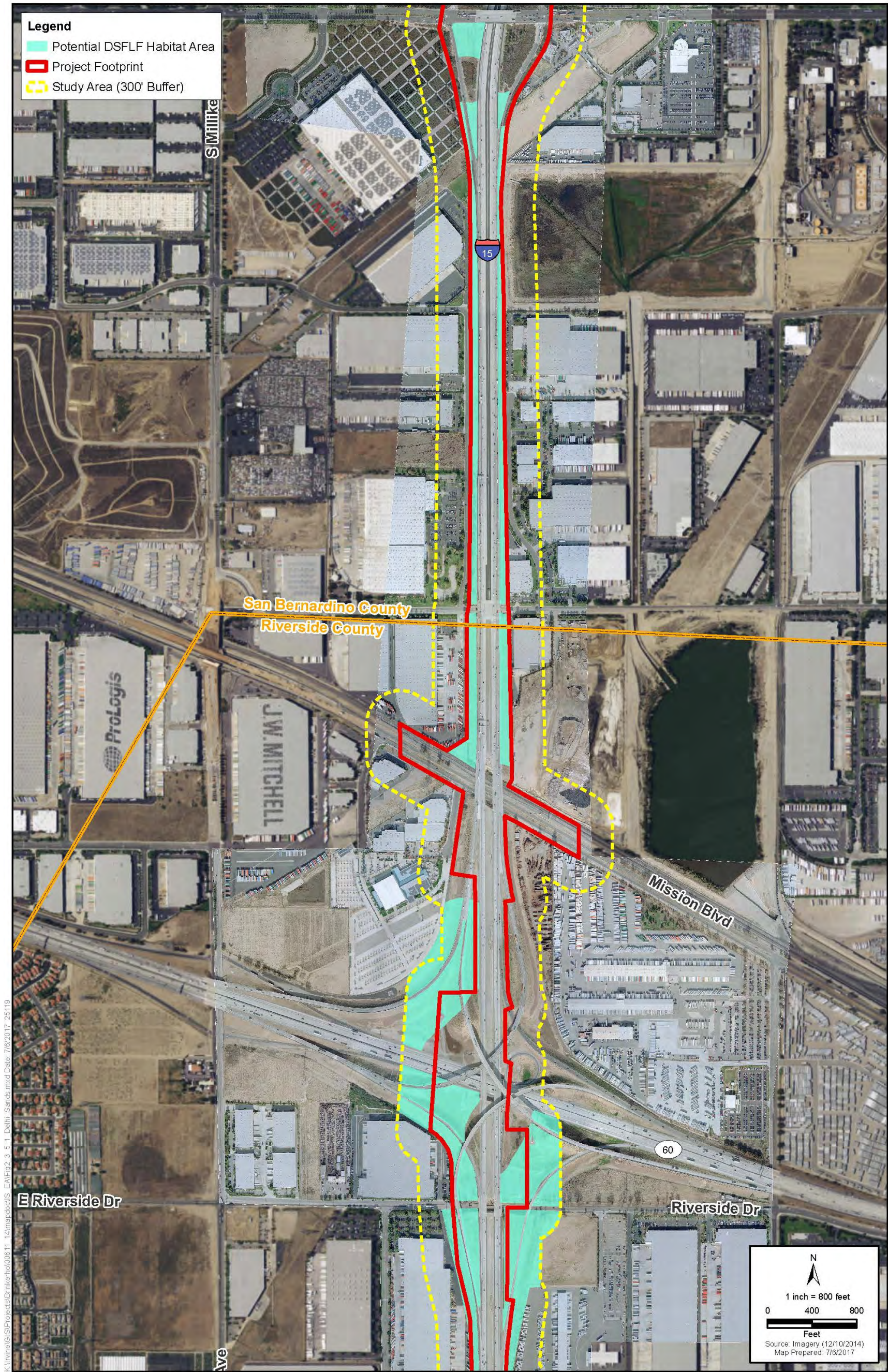
Figure 2-53. Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment - Sheet 2



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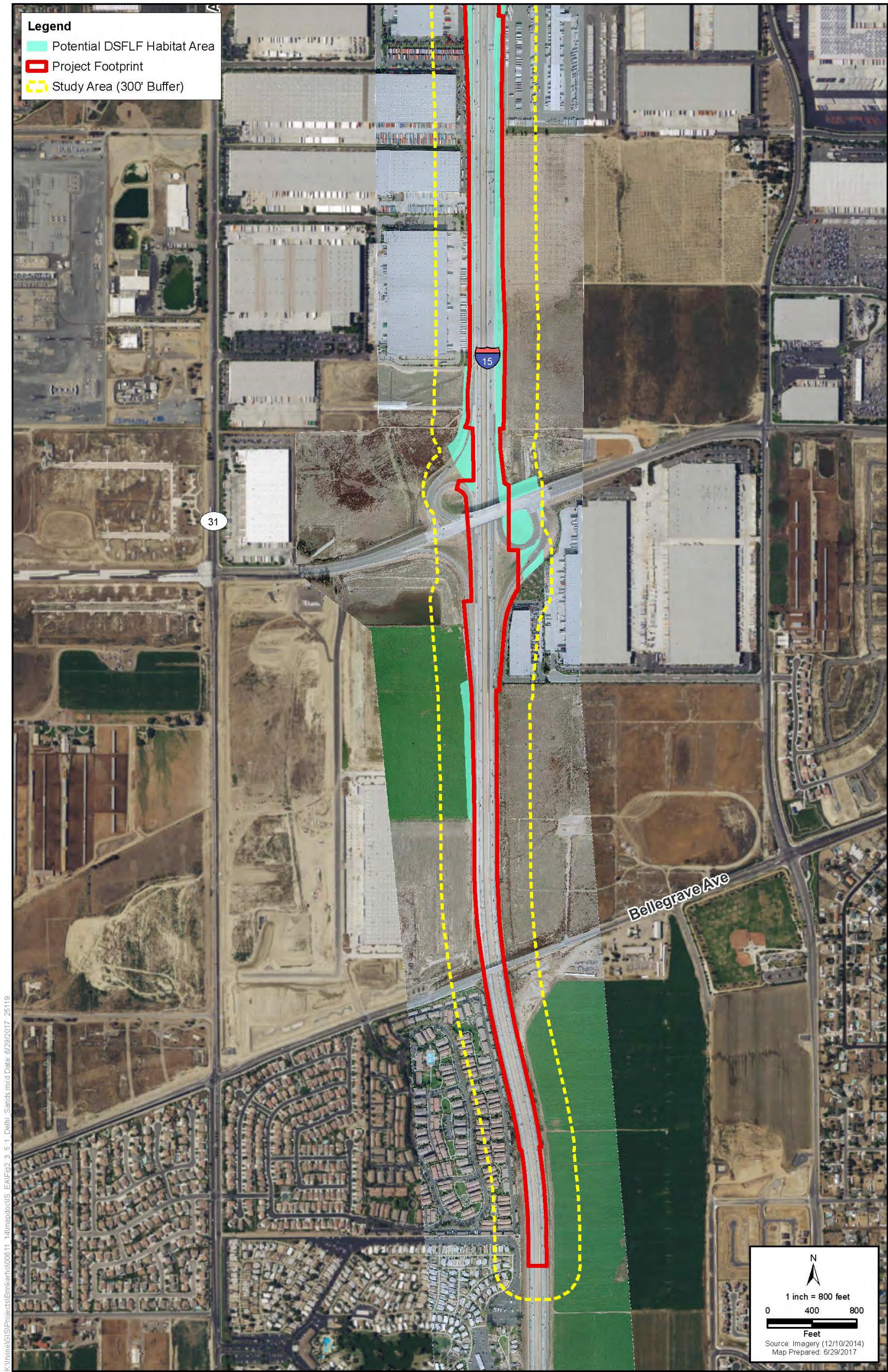
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Figure 2-53. Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment – Sheet 3



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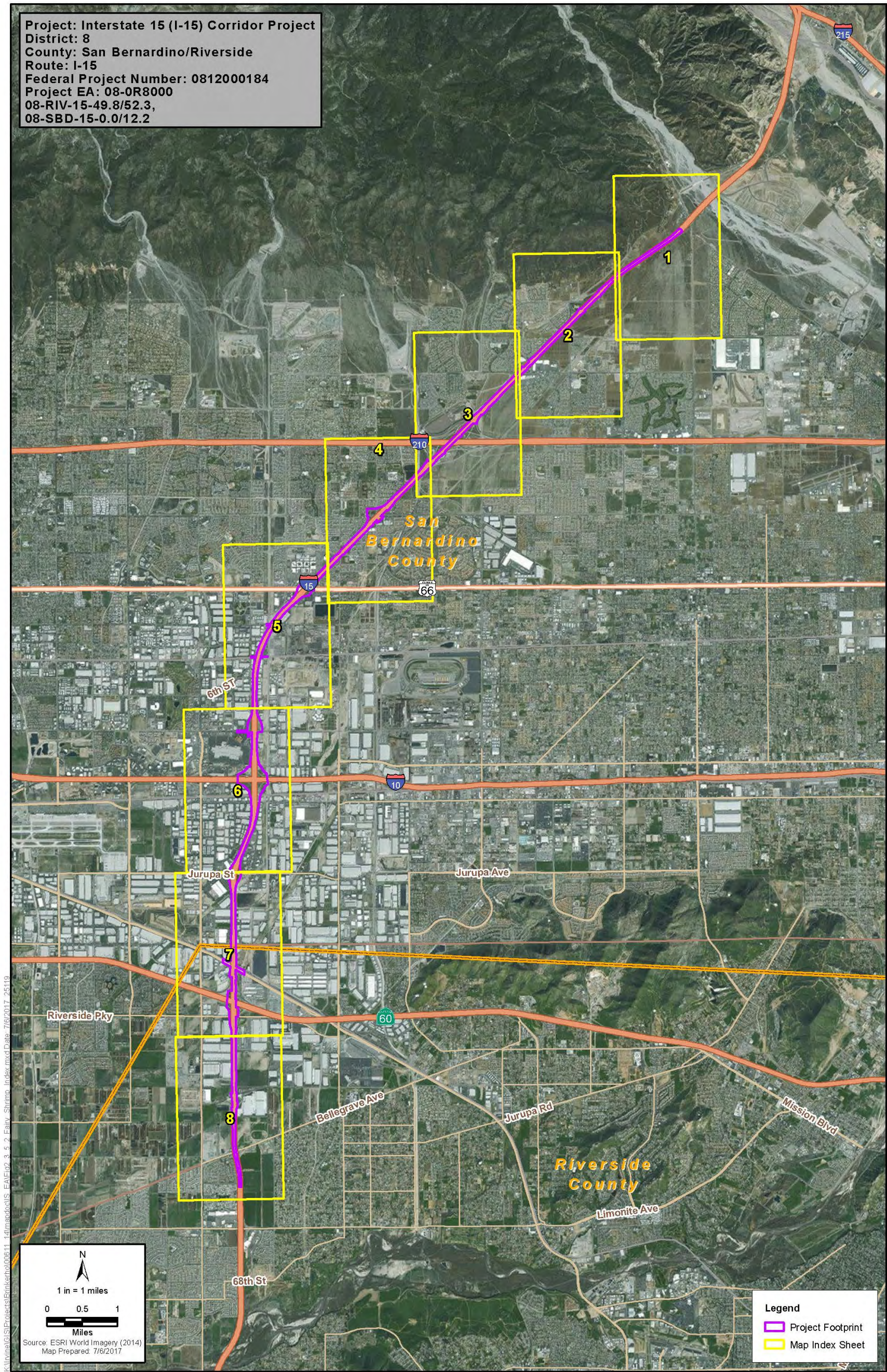
Figure 2-53. Delhi Sands Flower-Loving Fly (DSFLF) Habitat Assessment – Sheet 4



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Figure 2-54. Fairy Shrimp Habitat Assessment Index



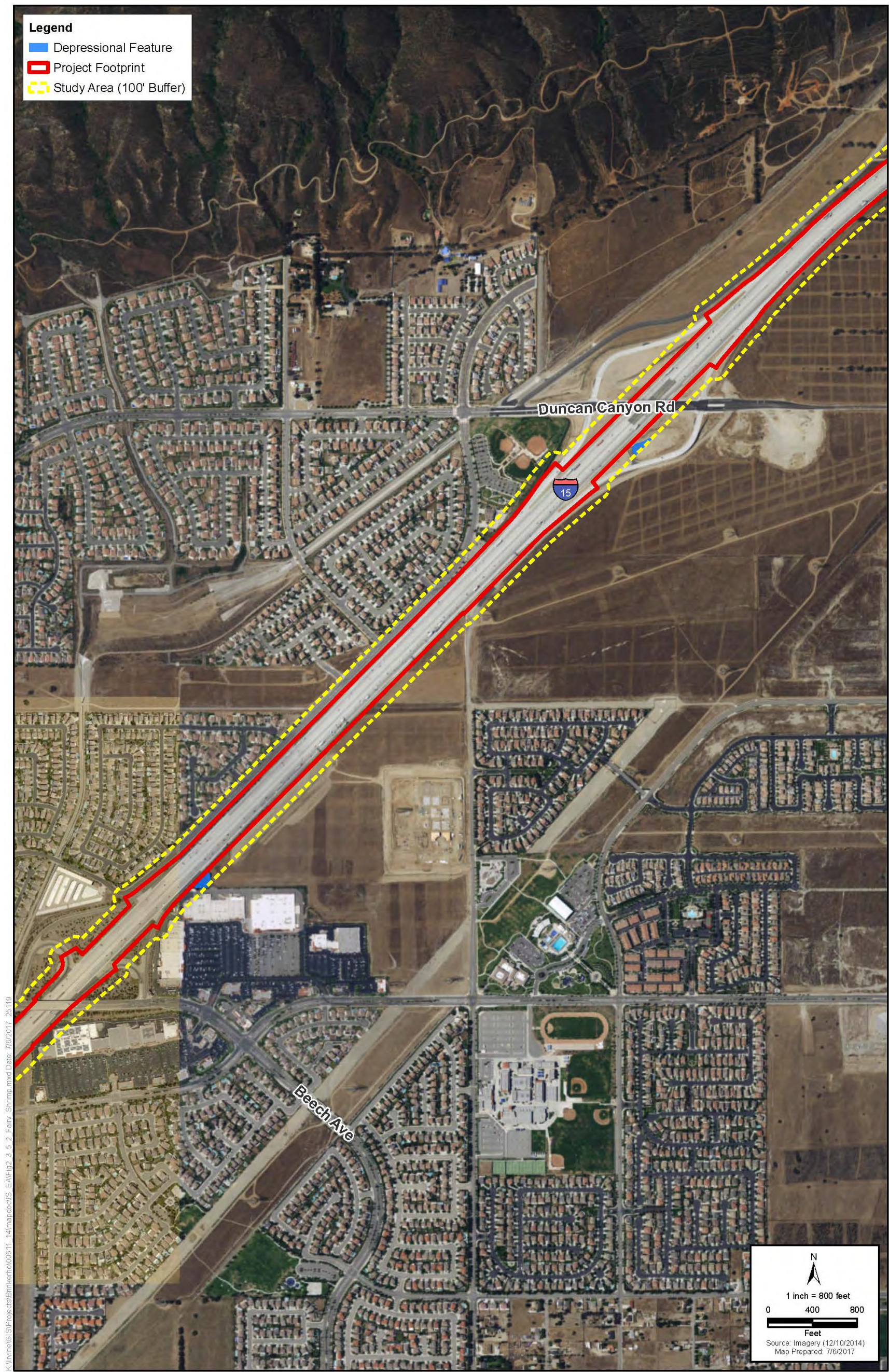
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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 1



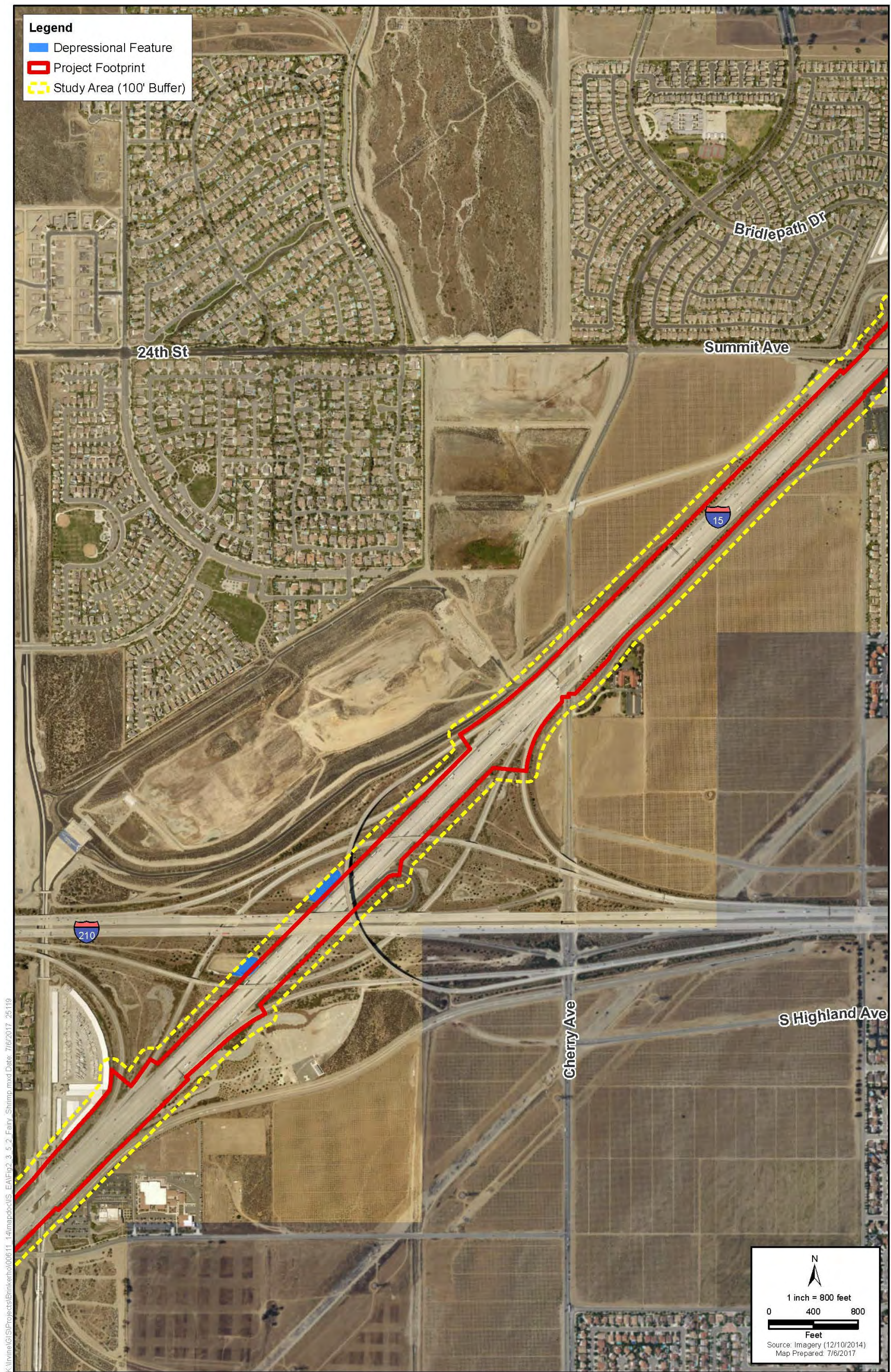
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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 2



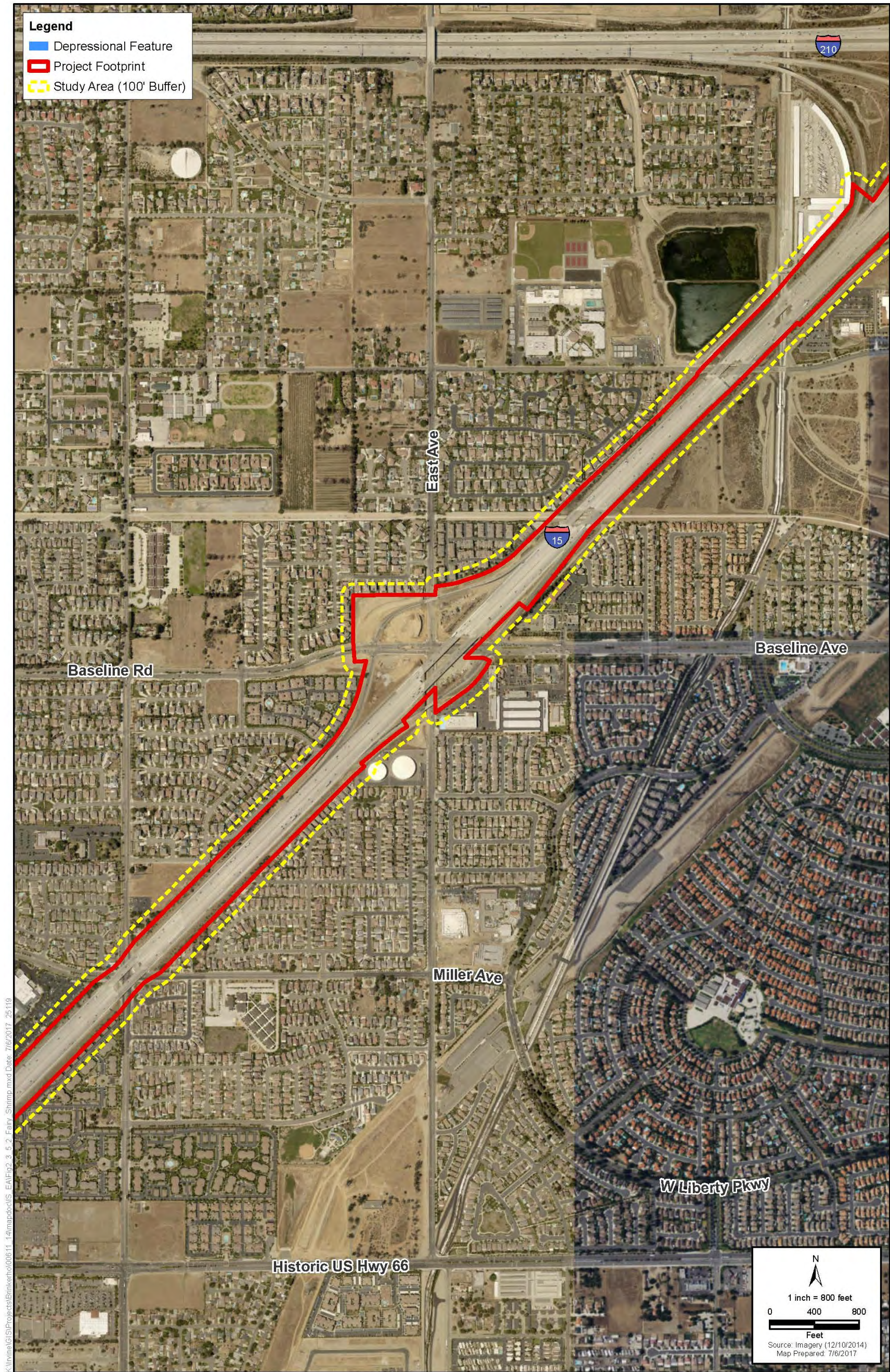
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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 3



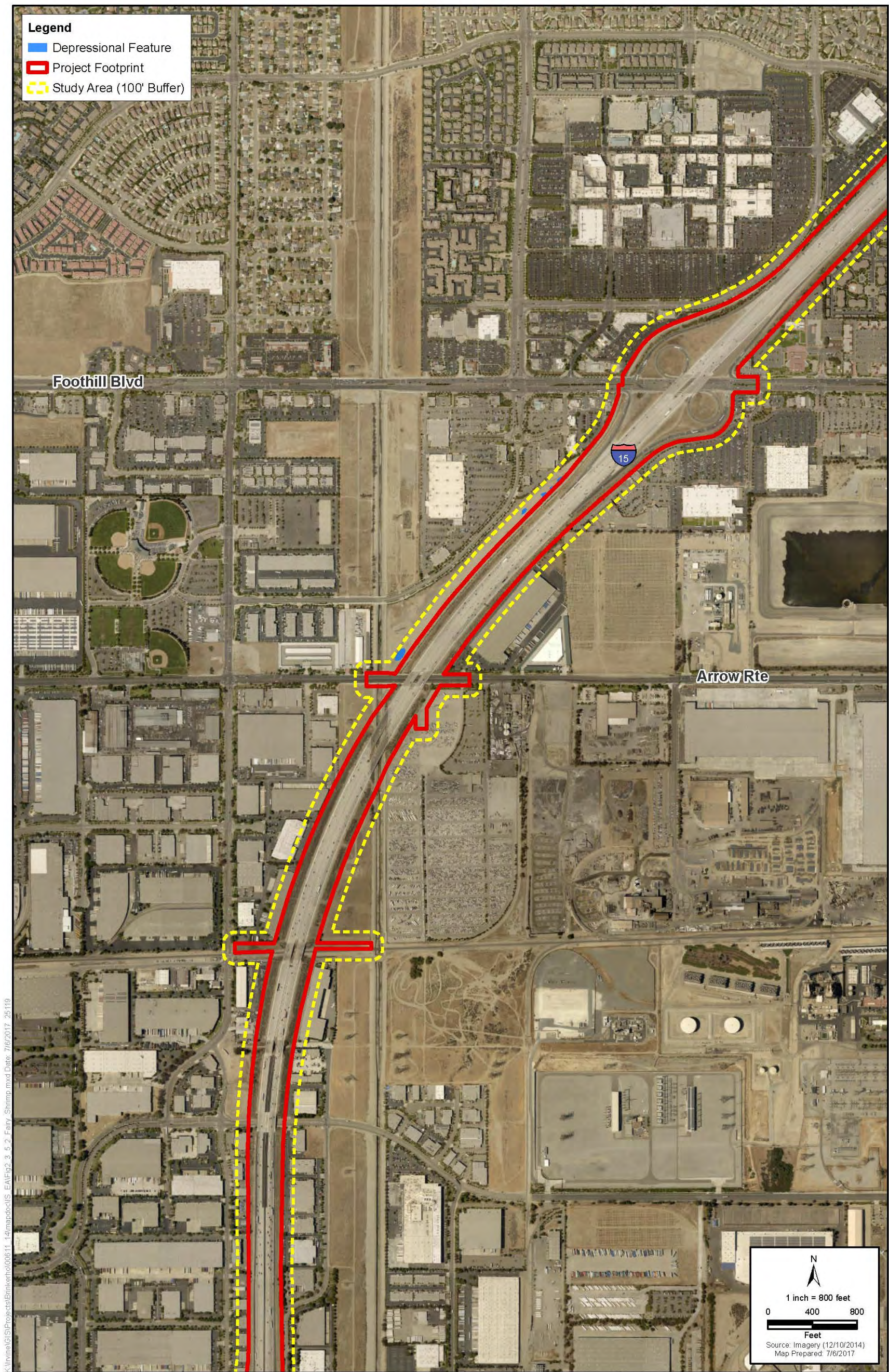
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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 4



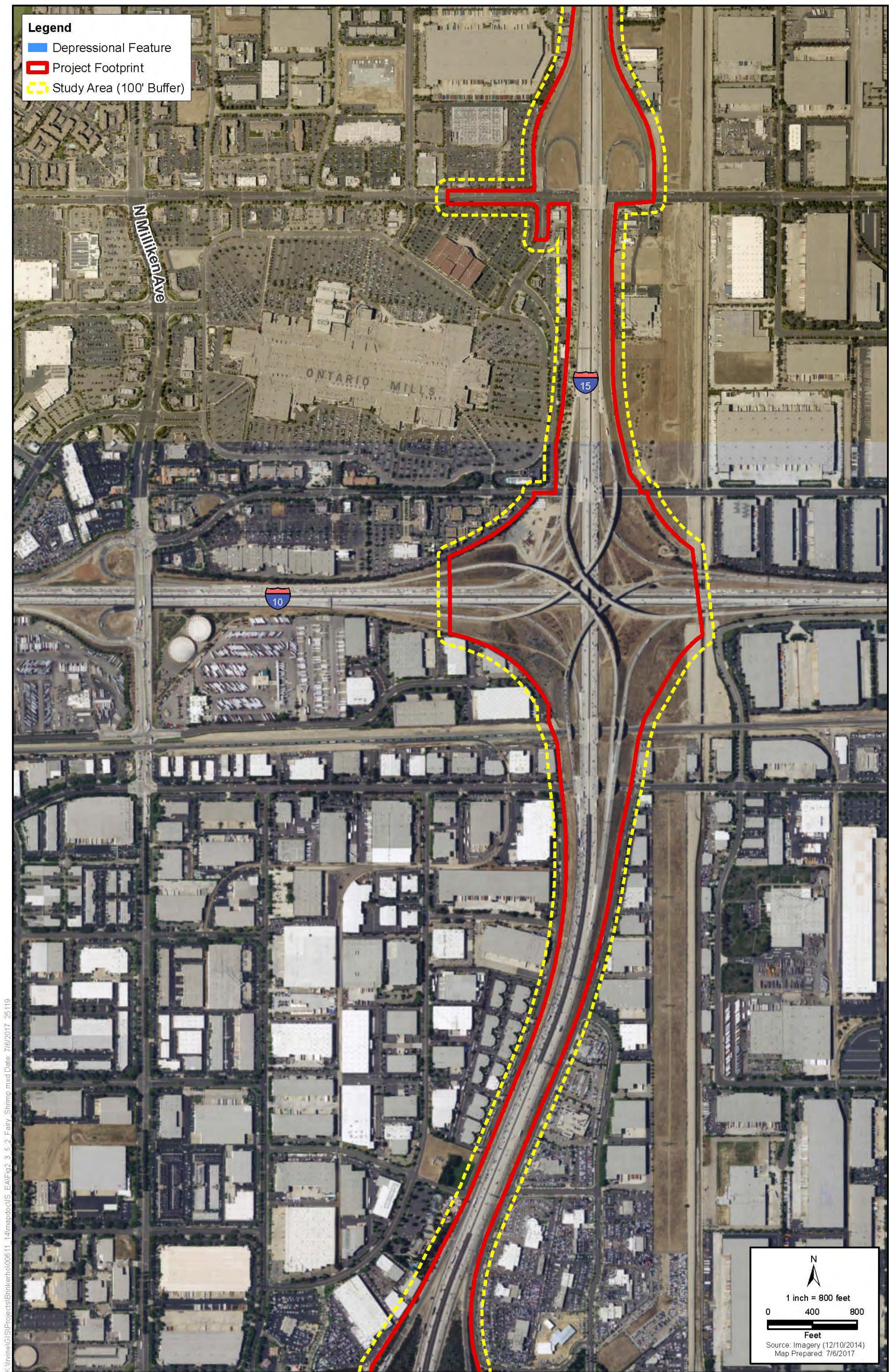
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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 5



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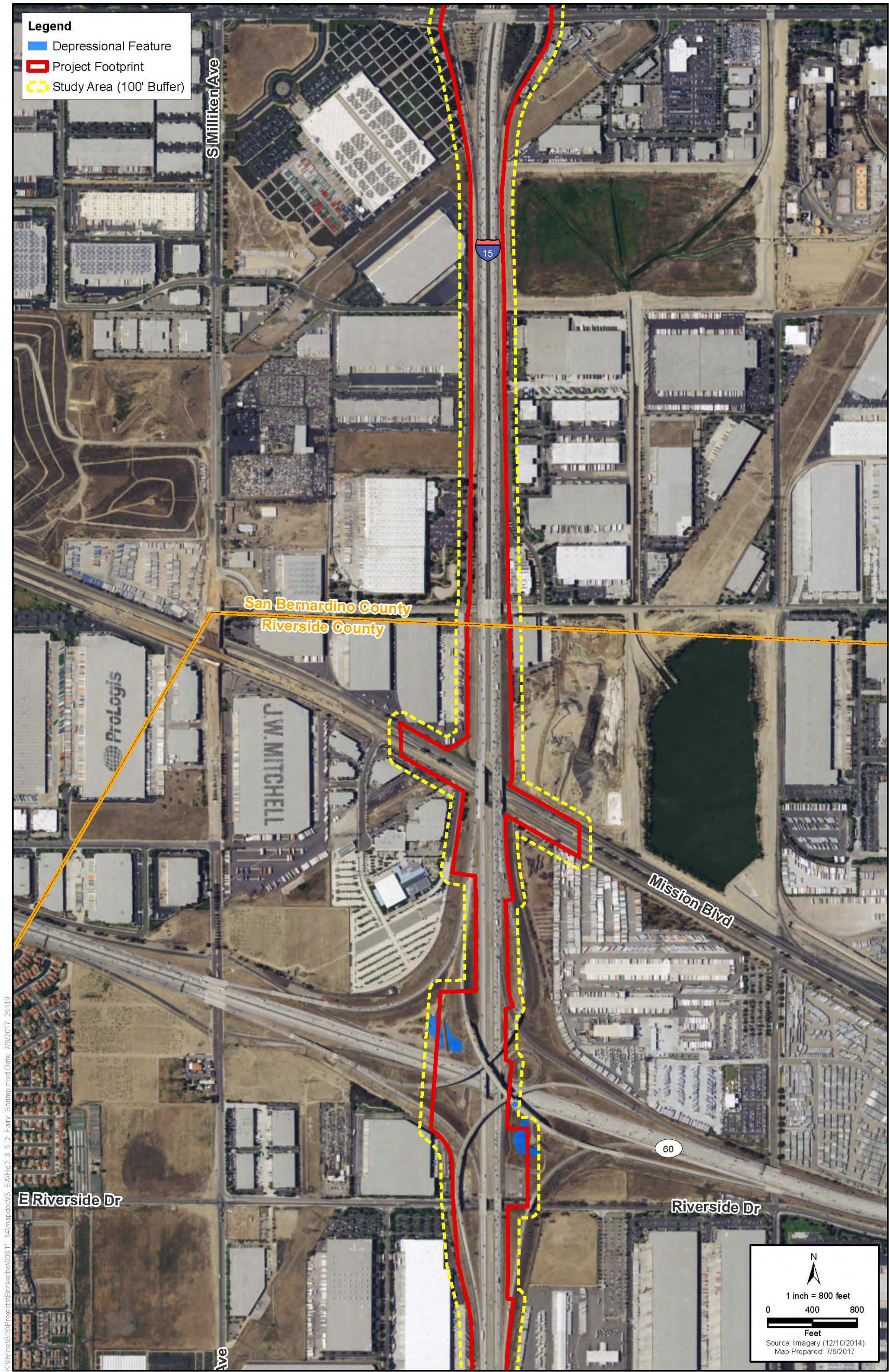
Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 6



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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 7



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Figure 2-54. Fairy Shrimp Habitat Assessment – Sheet 8



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Coastal California Gnatcatcher

Coastal California gnatcatcher was reported as occurring approximately 0.5 mile from the northern end of the BSA in 1991 (CDFW 2016). The BSA contains potentially suitable habitat for coastal California gnatcatcher within California Buckwheat Scrub/Disturbed California Buckwheat Scrub and California Sagebrush-California Buckwheat Scrub/Disturbed California Sagebrush-California Buckwheat Scrub vegetation communities (**Figure 2-55**). However, the potential for this species to occur is deemed low because the habitat is generally heavily disturbed and fragmented, ranging from poor to fair quality. The BSA for coastal California gnatcatcher included two general survey areas, one in the north and one in the south (**Figure 2-55**). Coastal California gnatcatcher was not observed during protocol field surveys conducted in spring 2016. As such, coastal California gnatcatcher is considered absent from the BSA. In addition, California Buckwheat Scrub is not the preferred vegetation community for the coastal California gnatcatcher, although this community is occasionally utilized by the species, particularly if it contains a California sage component. No critical habitat for the coastal California gnatcatcher occurs within the BSA.

San Bernardino Kangaroo Rat

Potentially suitable habitat for San Bernardino kangaroo rat is found within the BSA in the form of Chamise Chaparral and California Buckwheat Scrub immediately adjacent to Chamise Chaparral (including disturbed habitats). In addition, there is critical habitat for San Bernardino kangaroo rat in the northern portion of the BSA (**Figure 2-56**).

Multiple Species Habitat Conservation Plan

Delhi Sands Flower-Loving Fly

Delhi Sands flower-loving fly is a fully Covered Species under the MSHCP. The southern portion of the BSA occurs within MSHCP Proposed Noncontiguous Habitat Block 1; as such, a habitat evaluation was performed and two years of protocol focused surveys were conducted to determine whether this species is present. The habitat evaluation determined that approximately 60 acres of suitable habitat exist within the MSHCP portion of the BSA (see **Figure 2-53**). Protocol focused surveys in 2016 and 2017 were negative. In addition, Delhi Sands flower-loving fly was not detected during the 2009 or 2010 focused surveys for the I-15 Express Lanes Project, which overlapped with the Riverside County portion of the BSA. As such, Delhi Sands flower loving fly is considered absent within the MSHCP portions of the BSA.

Fairy Shrimp

The MSHCP provides protection for all fairy shrimp habitat that occurs within the MSHCP area (MSHCP Volume 1, Section 6.1.2). Under the MSHCP, all stock ponds, ephemeral pools, and other features must be assessed for providing suitable habitat to Riverside fairy shrimp, vernal pool fairy shrimp, and Santa Rosa fairy shrimp. Six depressional features exist within the MSHCP portions of the BSA. These include both natural ponding areas, such as low spots and road ruts that collect water either from the immediate watershed area or through the existing water table, and artificially created basins designed to collect and manage stormflows from adjacent freeway infrastructure and other developed areas. All depressional features were found to lack the requirements needed to support fairy shrimp during habitat assessment surveys. None of the features held water for longer than 12 days during the monitoring period or contained vernal pool indicator species. In addition, the features

are regularly disturbed due to roadside maintenance and no fairy shrimp occurrences are documented within the vicinity. As such, no suitable habitat is present within MSHCP portions of the BSA and fairy shrimp are considered absent.

2.3.5.3 Environmental Consequences

No Build Alternative

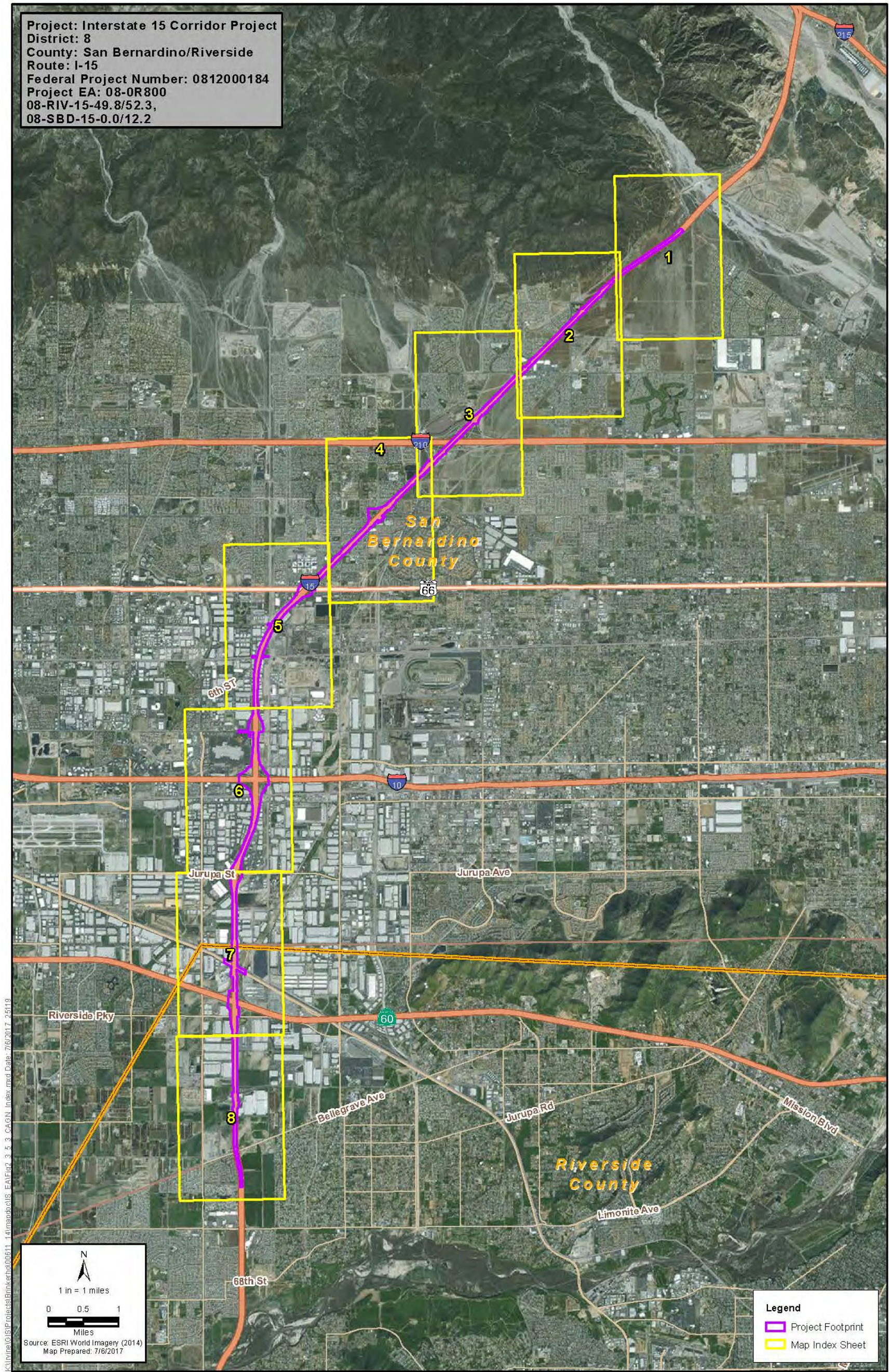
The No Build Alternative would not provide improvements on the I-15 within project limits, and as such, would not result in any impacts to federally and/or state-listed plant or wildlife species. Existing and projected traffic congestion would not be alleviated.

Build Alternative

Of the 15 species included in the USFWS species list (USFWS 2017), it was determined that five may potentially occur within the BSA (Santa Ana River woollystar, slender-horned spineflower, Delhi Sands flower-loving fly, coastal California gnatcatcher, and San Bernardino kangaroo rat; see **Table 2-96**). Suitable habitat is not present for the remainder of the species listed on the USFWS species list and, thus, they are considered absent from the BSA. Field surveys conducted in 2016 and 2017 did not detect Santa Ana River woollystar, slender-horned spineflower, Delhi Sands flower-loving fly, listed fairy shrimp, or coastal California gnatcatcher and they are also considered absent from the BSA.

In addition, although not listed on the USFWS species list, because portions of the BSA are located within the MSHCP plan area, it was also assessed for potentially suitable habitat for federally-listed vernal pool fairy shrimp and Riverside fairy shrimp.

Figure 2-55. Coastal California Gnatcatcher Focused Survey Index



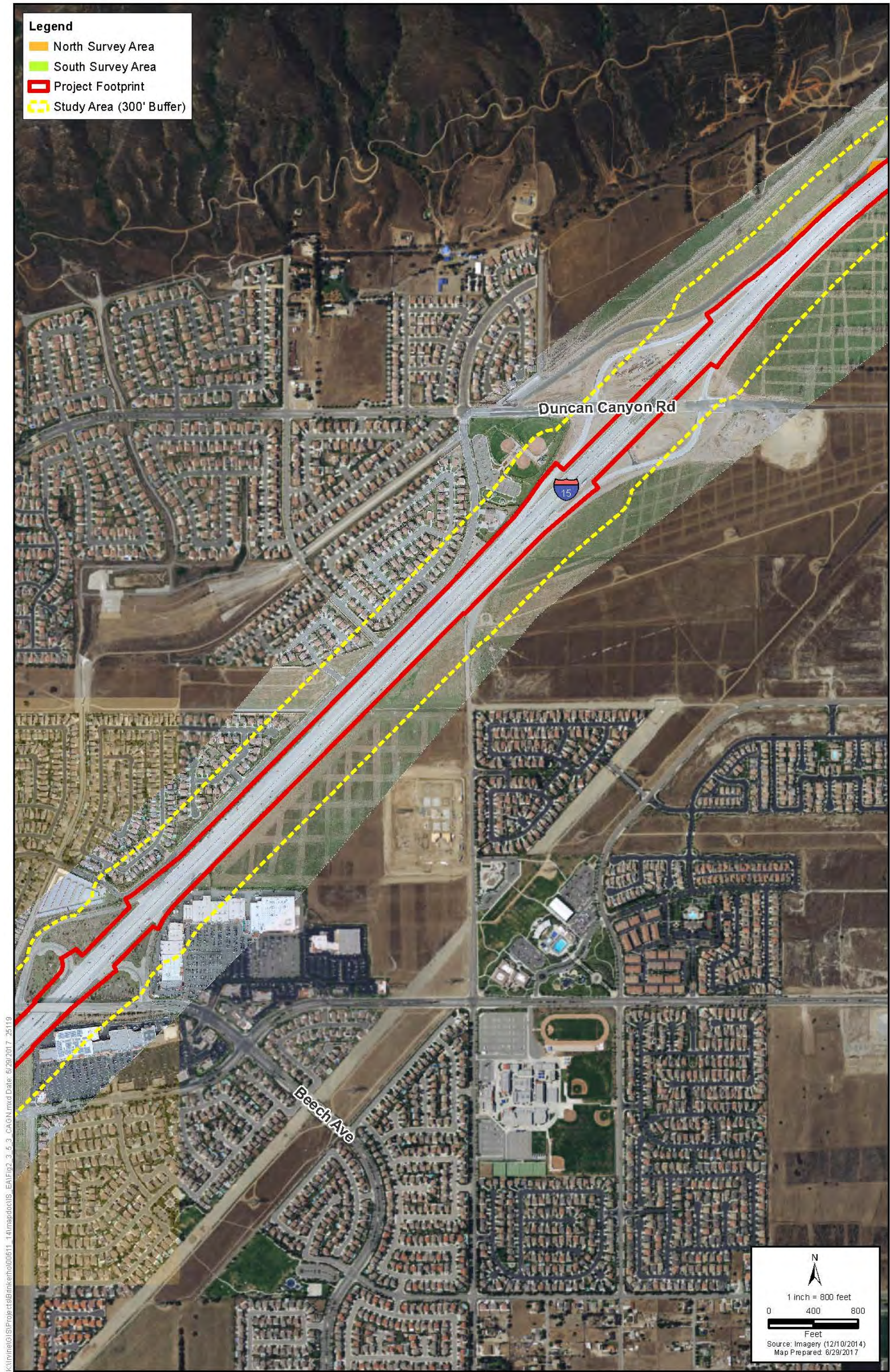
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 1



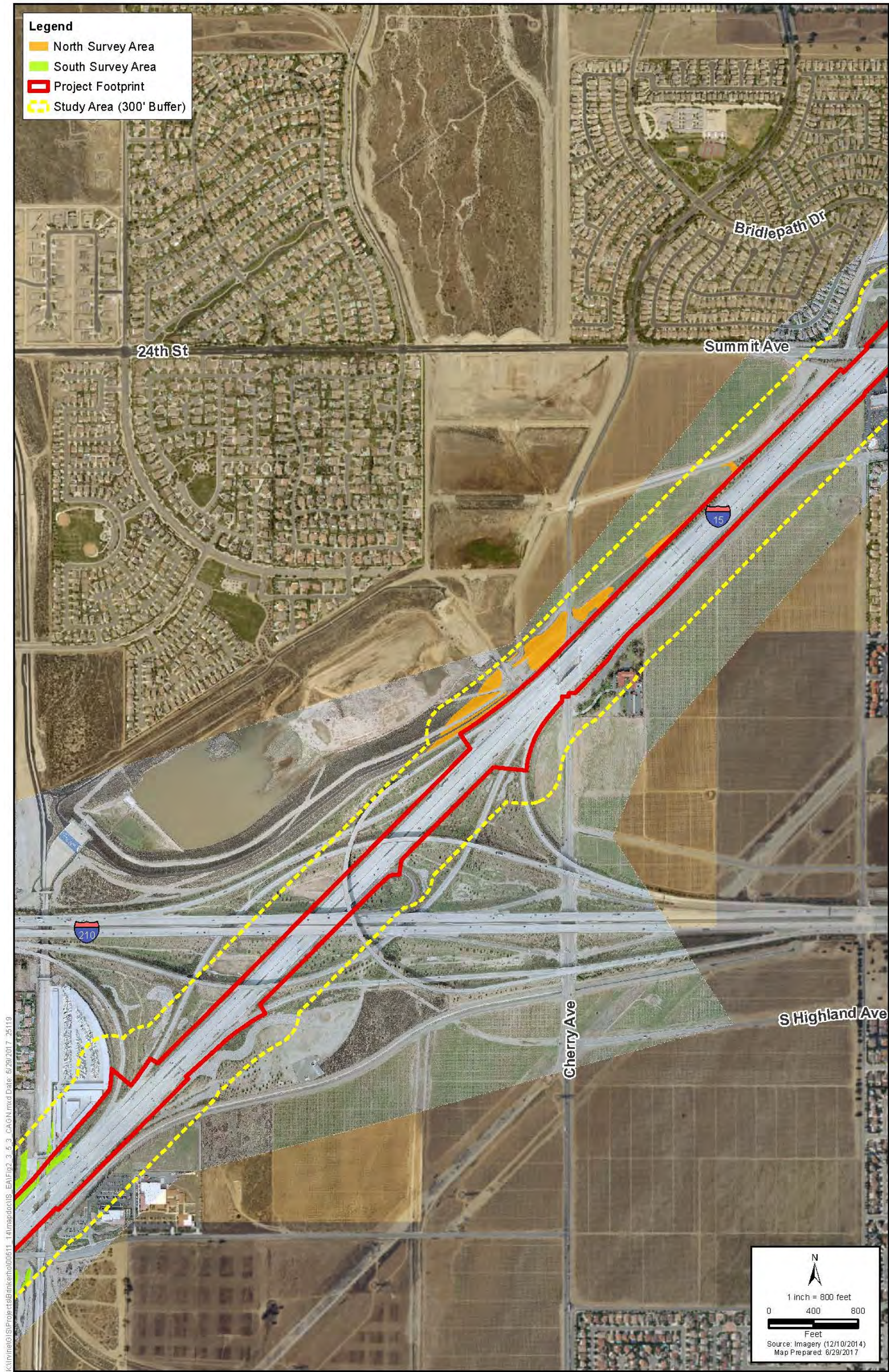
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 2



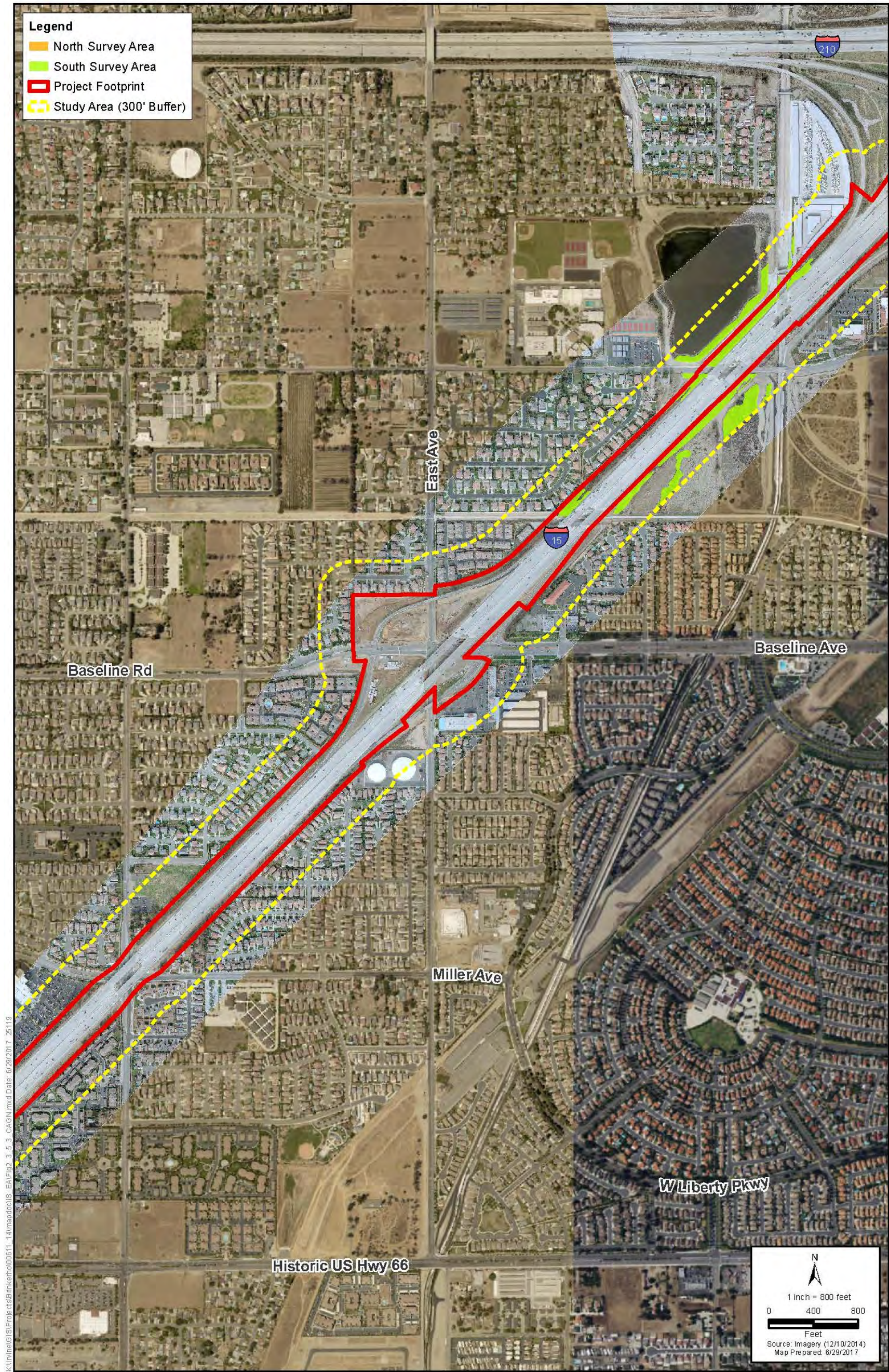
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 3



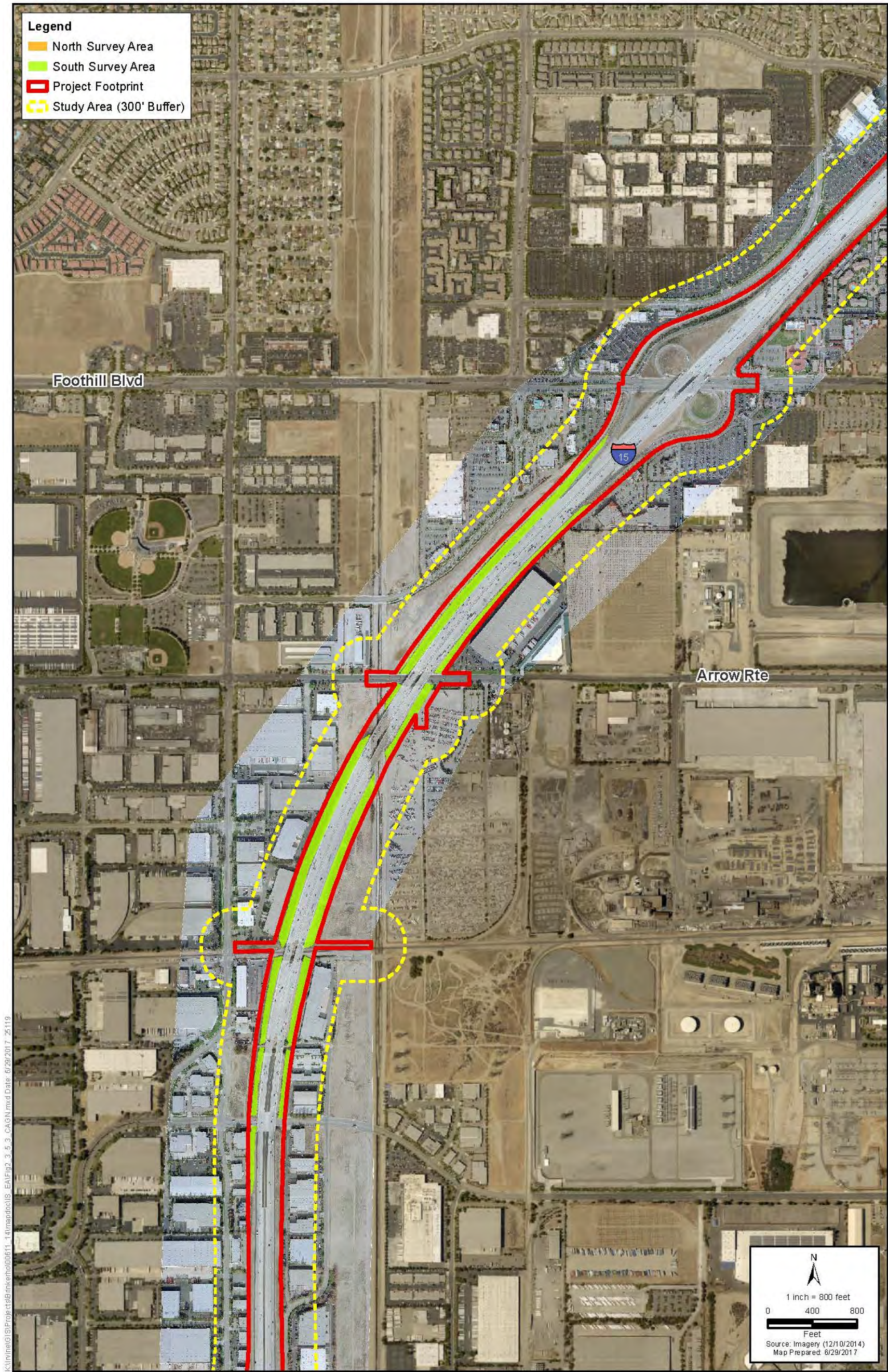
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 4



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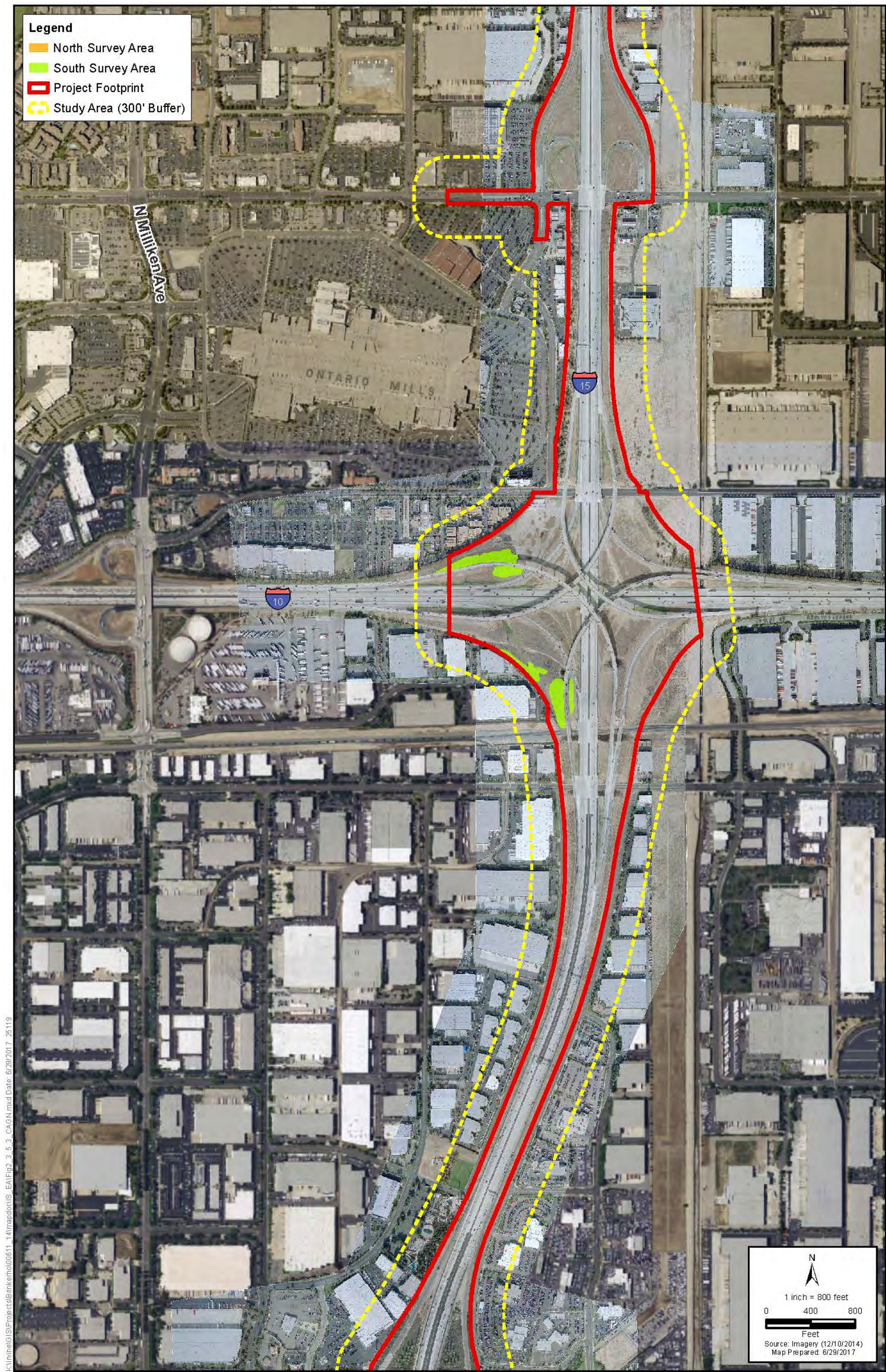
Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 5



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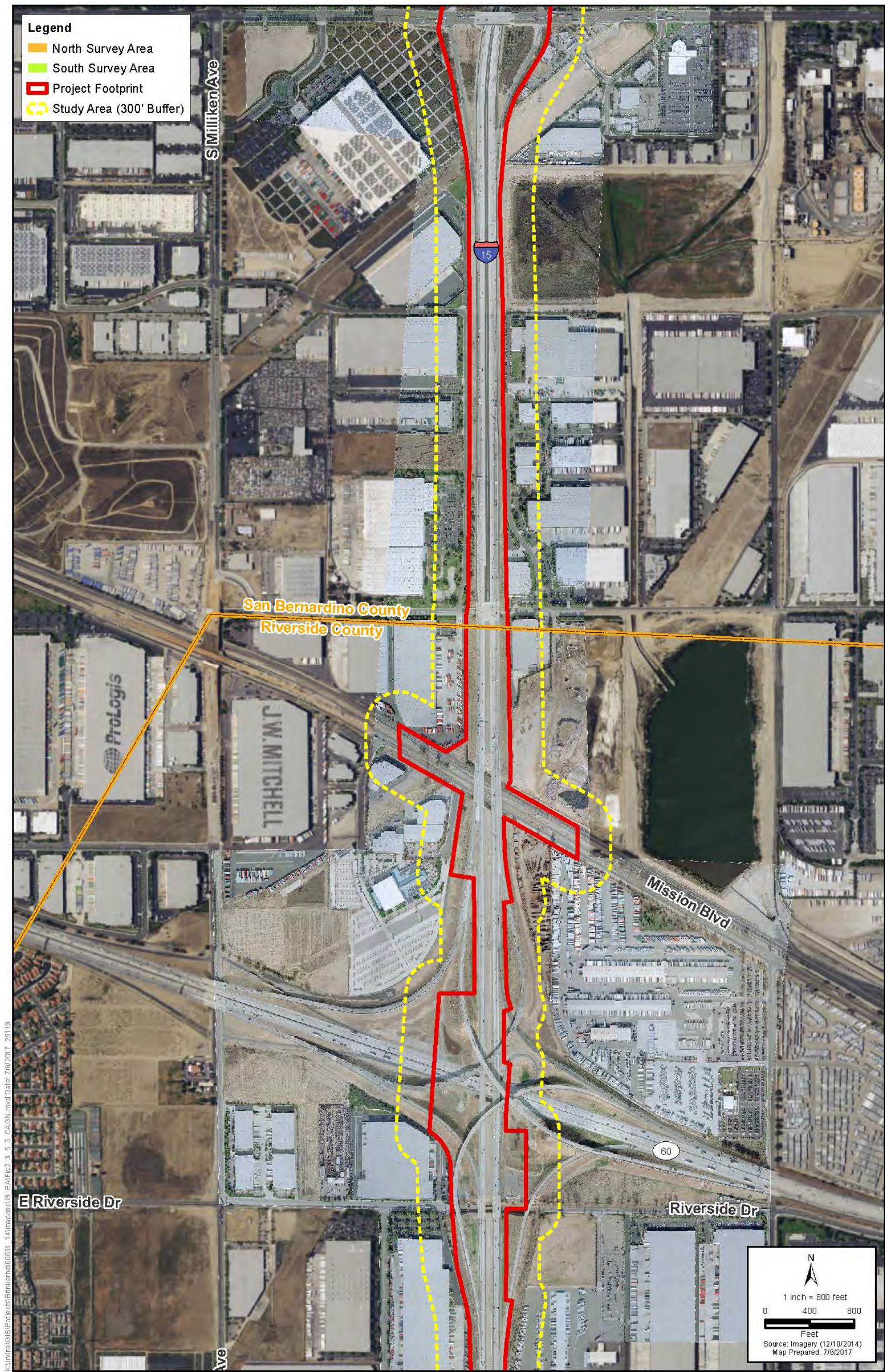
Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 6



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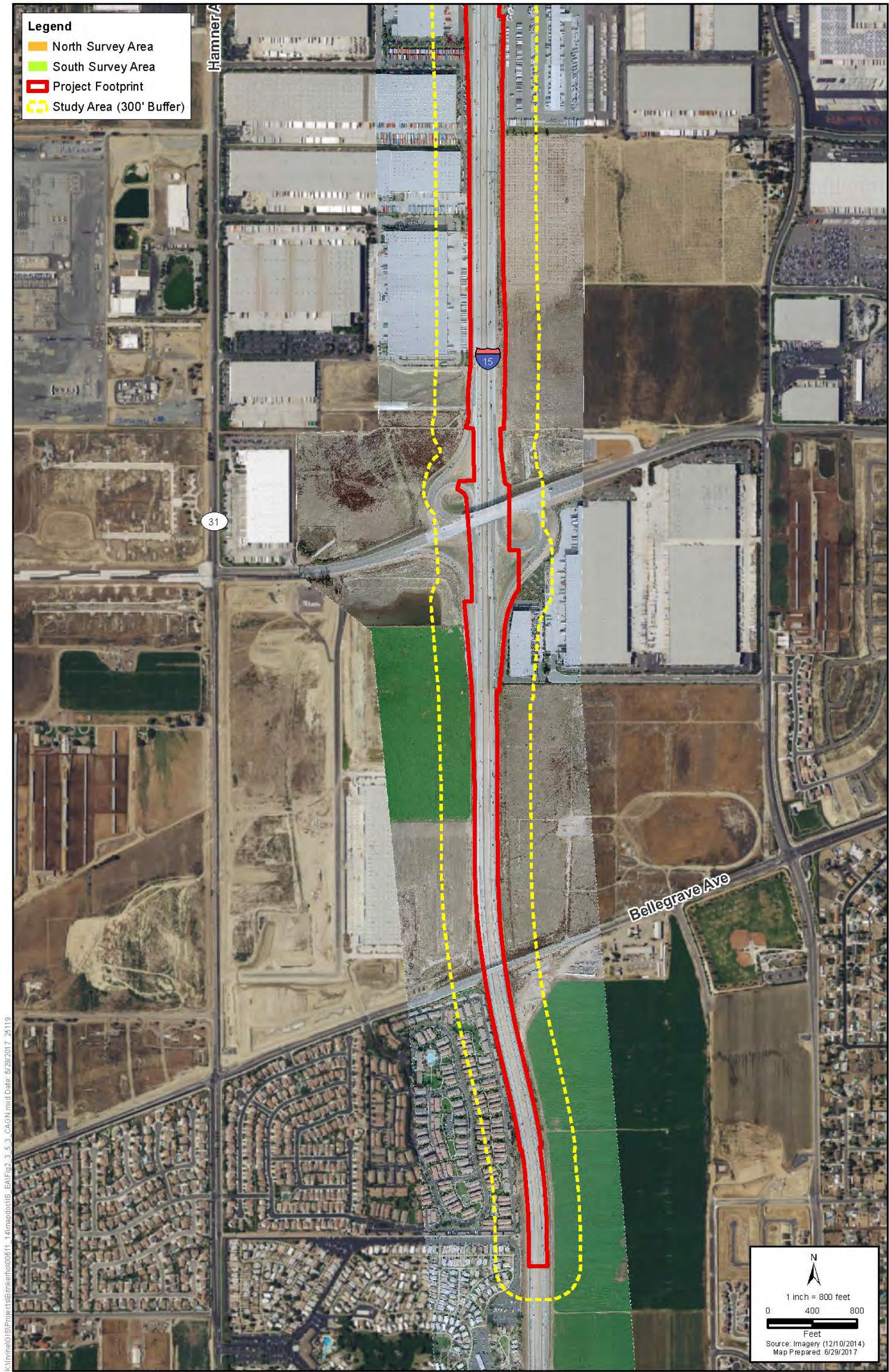
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 7



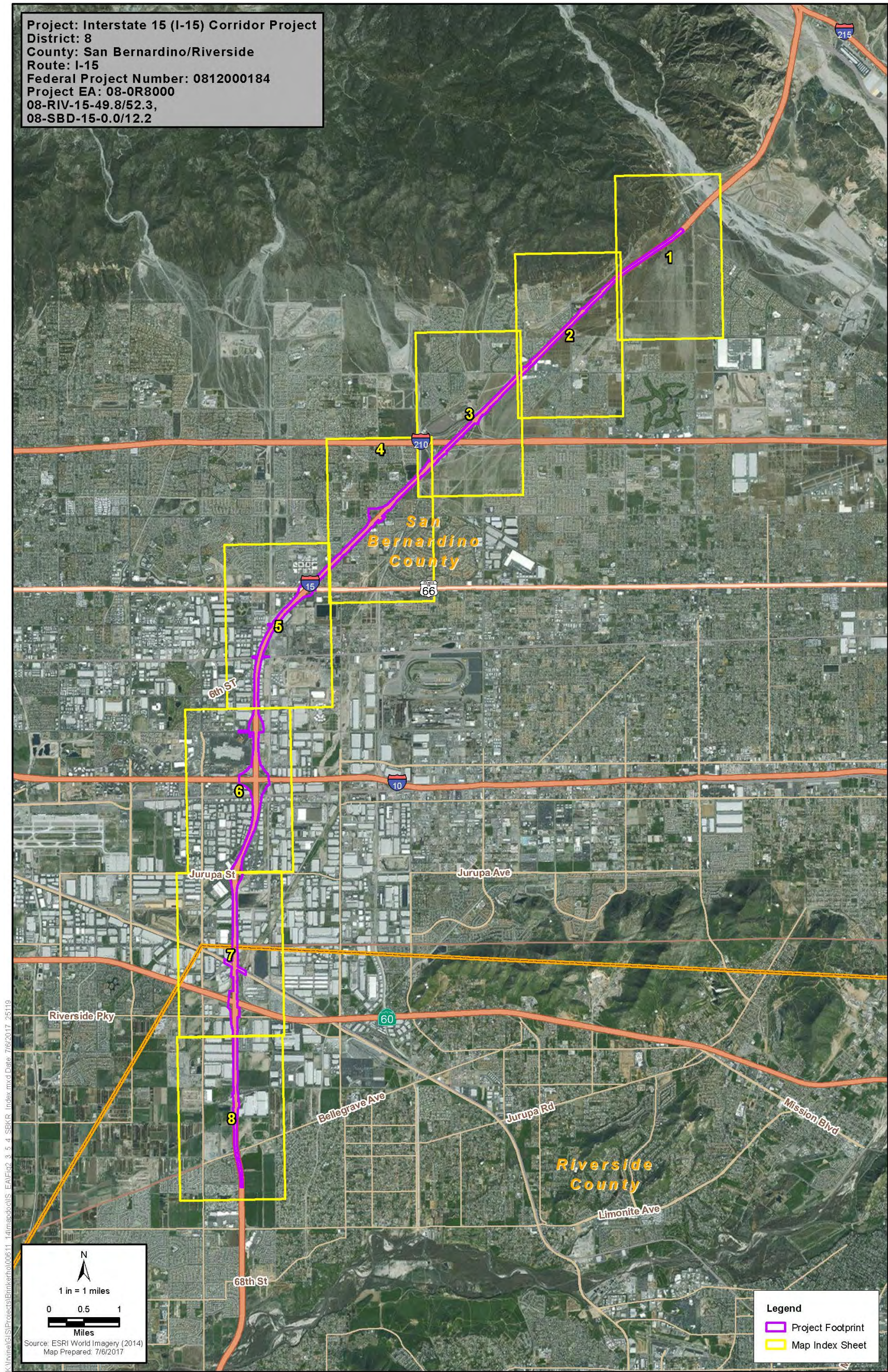
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Figure 2-55. Coastal California Gnatcatcher Focused Survey – Sheet 8



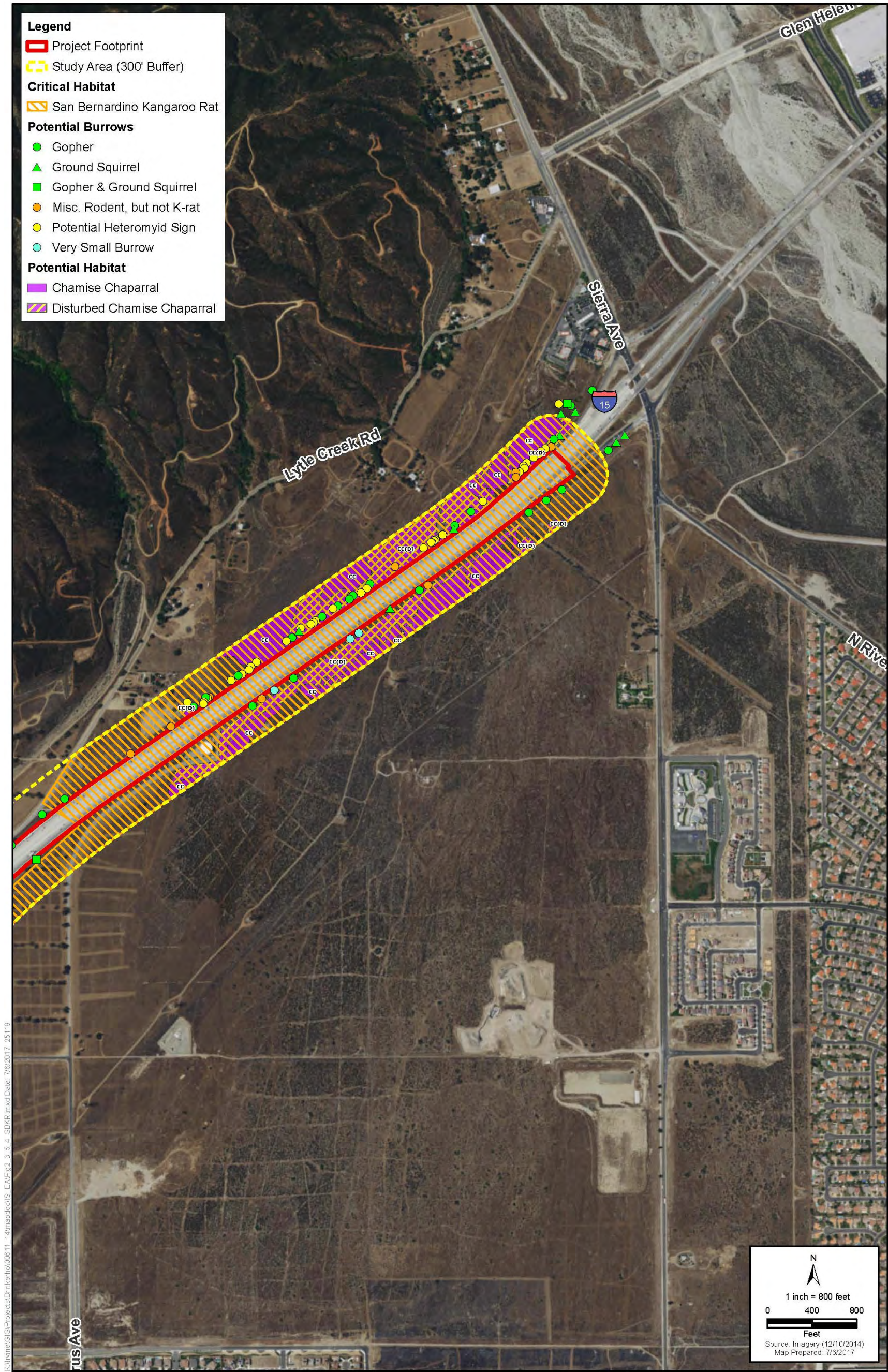
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat Index



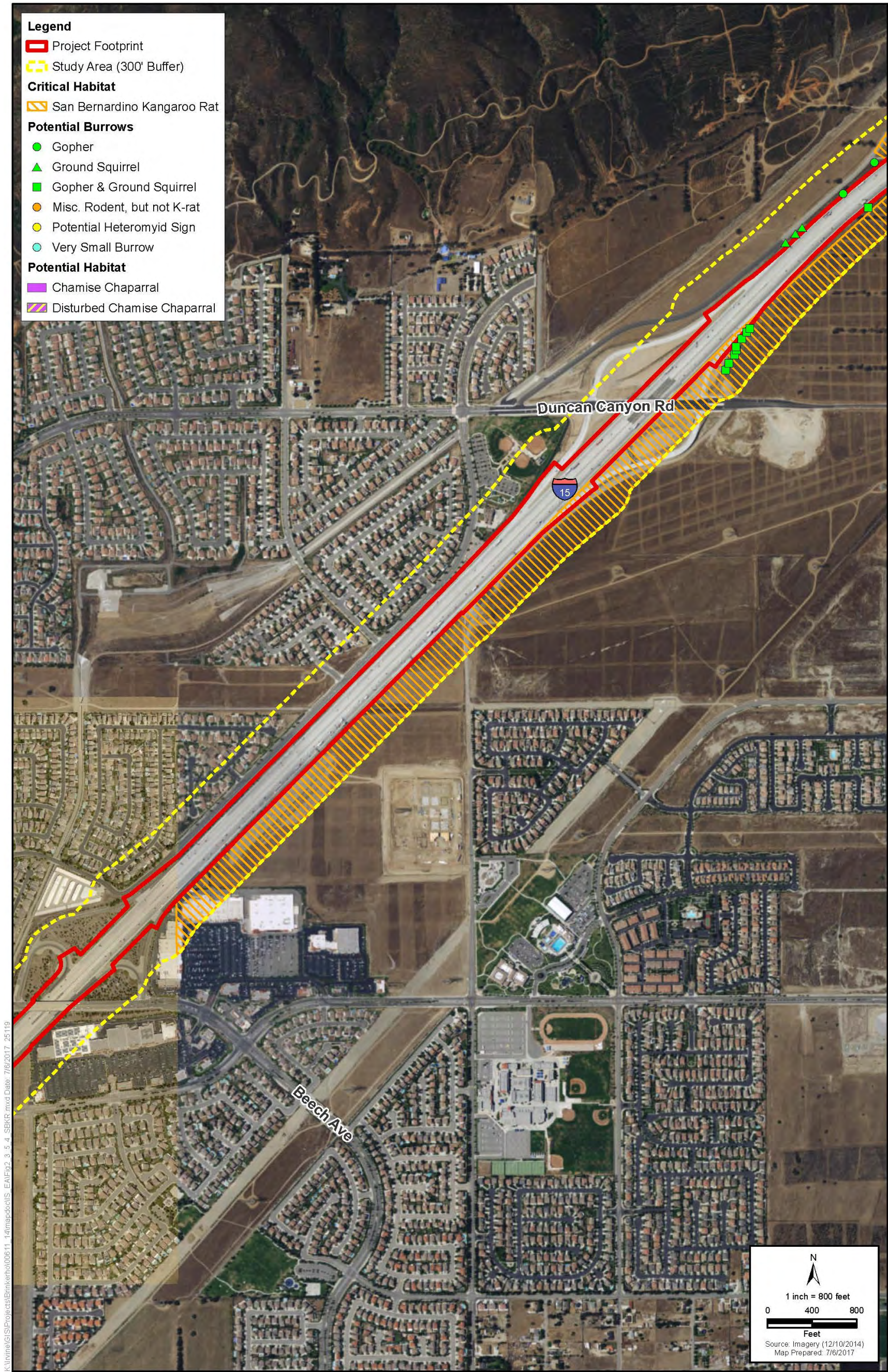
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 1



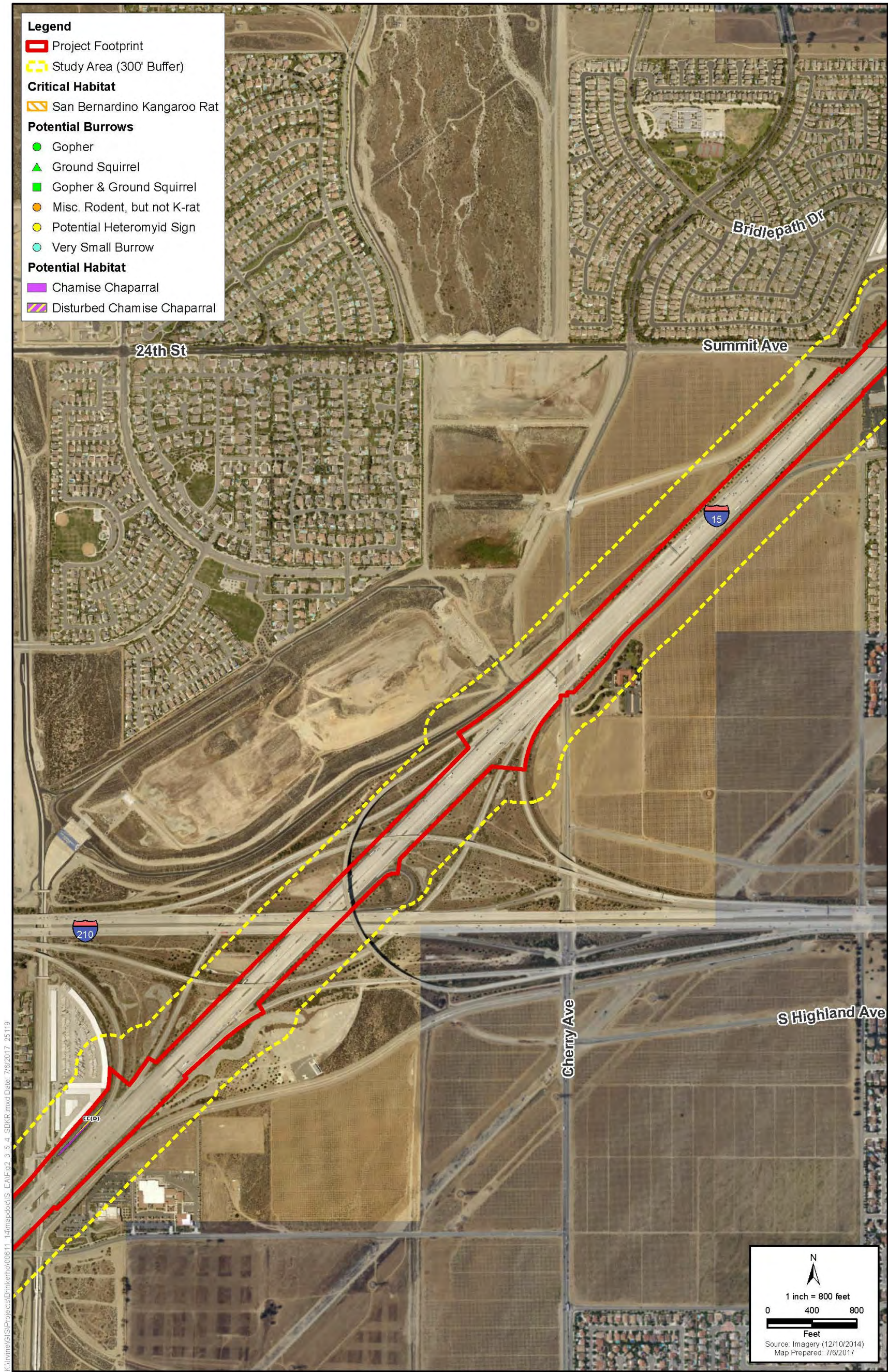
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 2



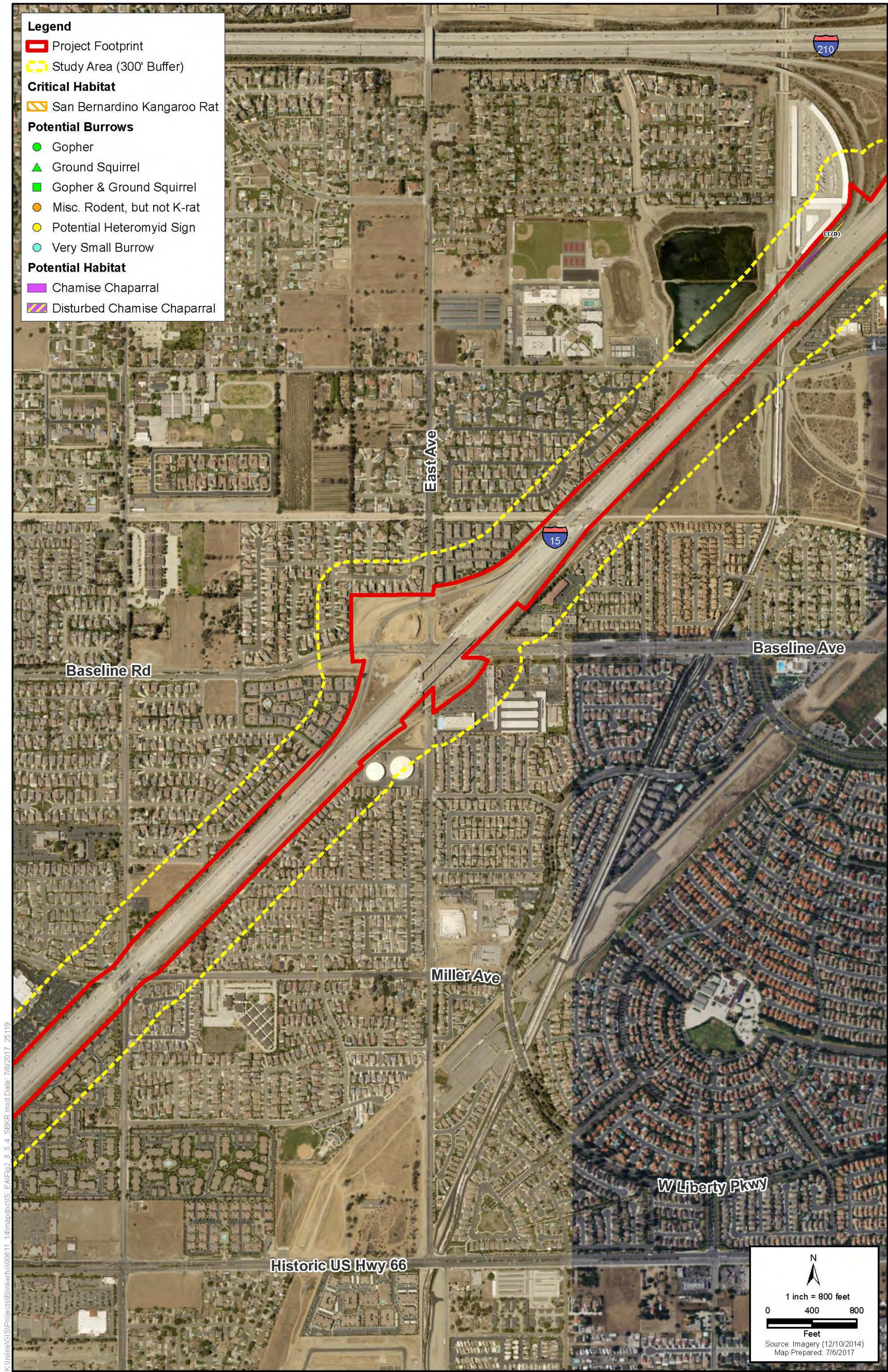
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 3



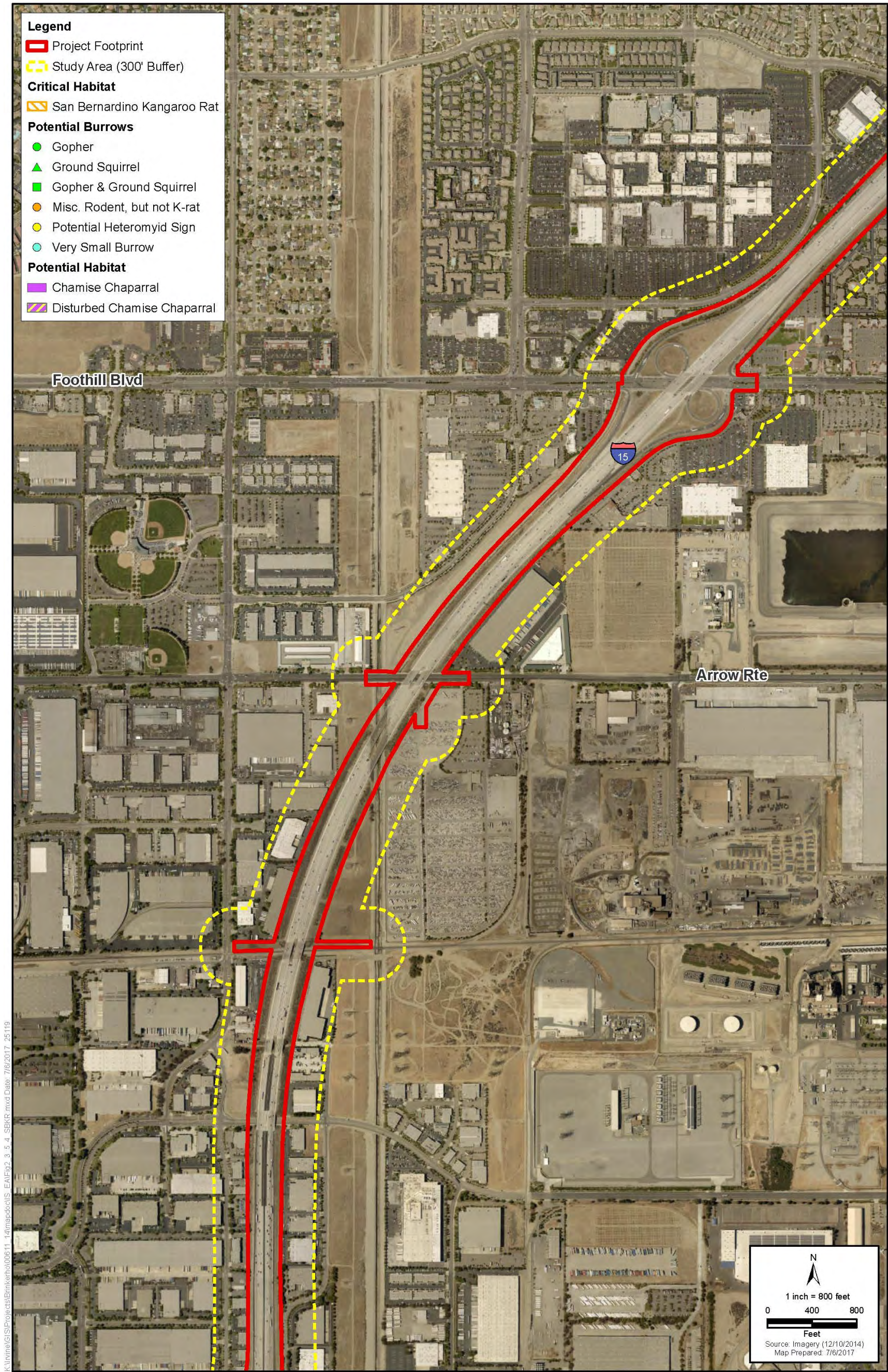
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 4



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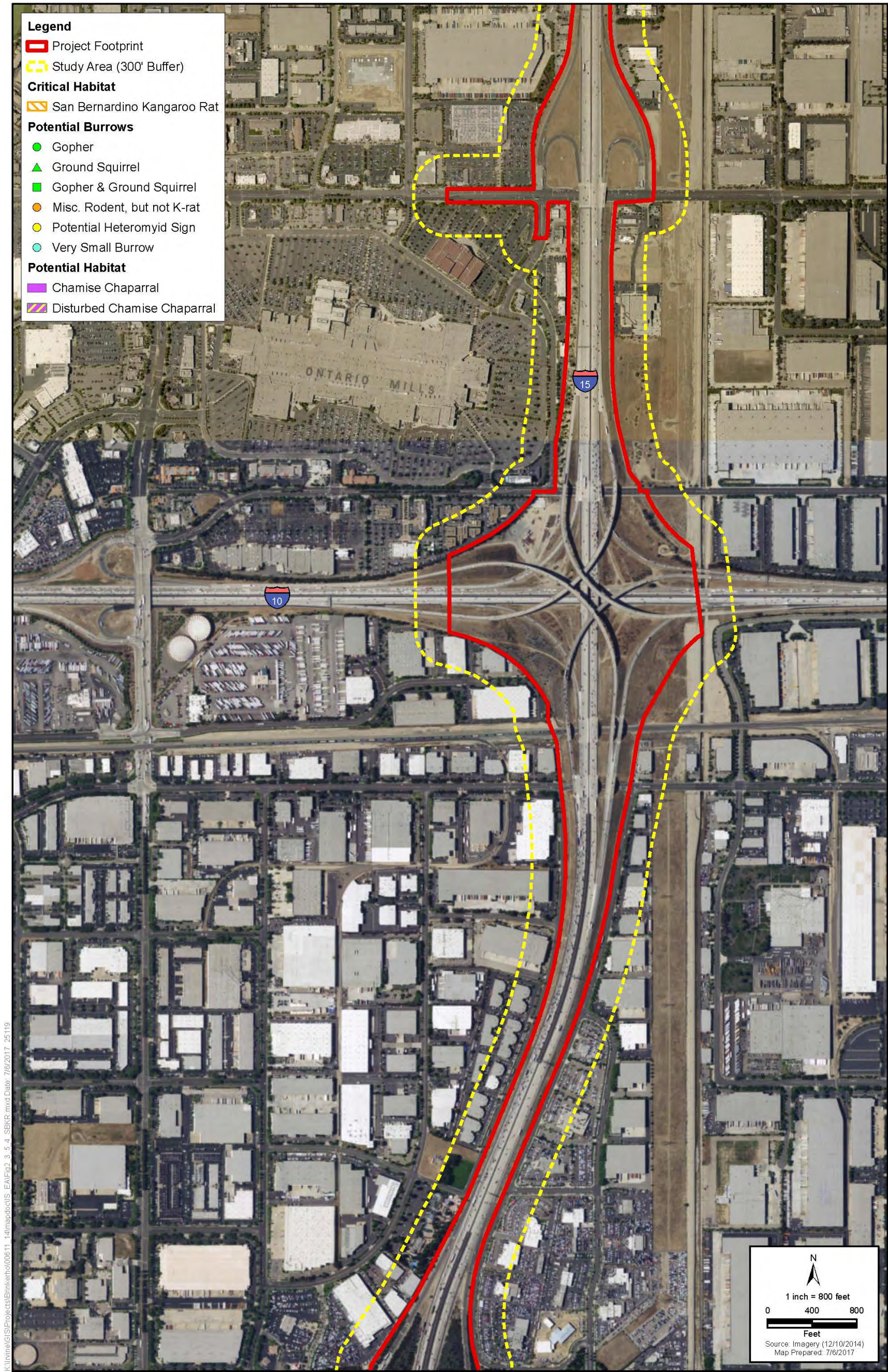
Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 5



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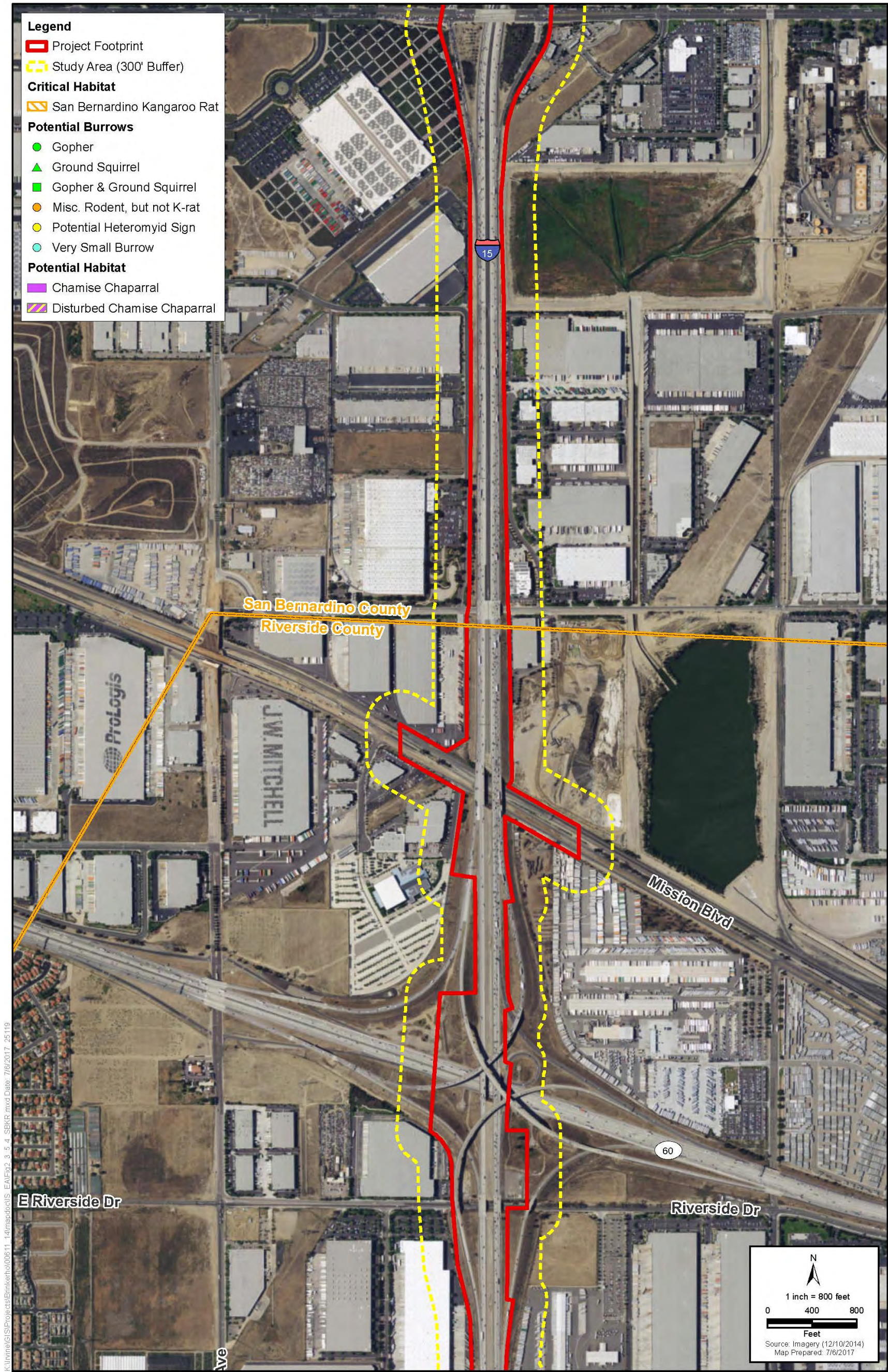
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 6



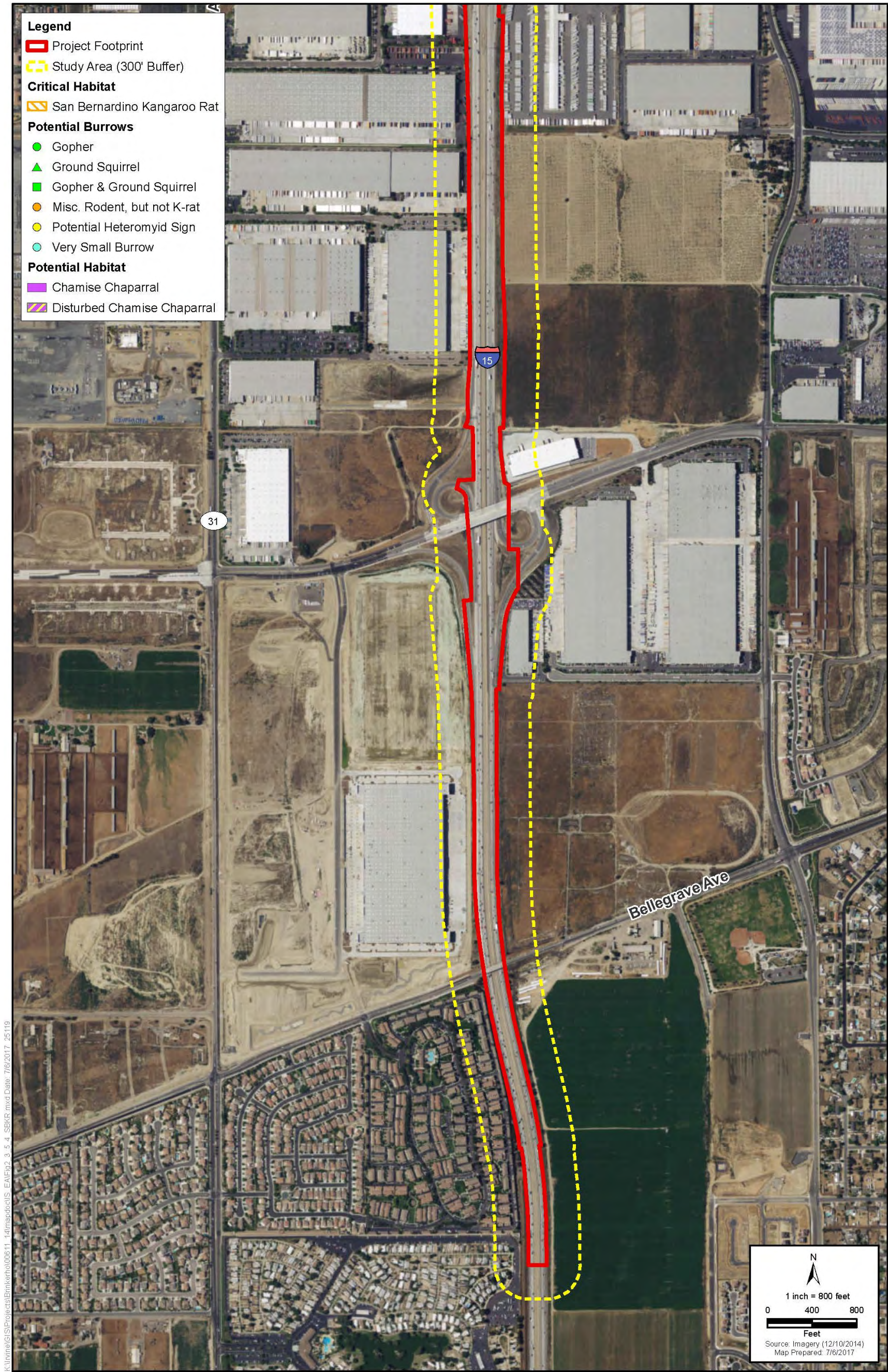
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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 7



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Figure 2-56. San Bernardino Kangaroo Rat Suitable Habitat and Critical Habitat – Sheet 8



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For the I-15 Corridor project, Caltrans has made a no effect finding for all the species identified on the USFWS species list for this project, included in **Table 2-97**, below, as well as for Vernal Pool Fairy Shrimp, and Riverside Fairy Shrimp, which were included because a portion of the project is located within the limits of the Western Riverside Multiple Species Habitat Conservation Plan, as discussed above.

Table 2-97. Preliminary FESA Effect Findings

Common Name	Scientific Name	Status*	Effect Finding	Effect Finding for Critical Habitat
Plants				
San Diego Ambrosia	<i>Ambrosia pumila</i>	FE	No Effect	No Effect
Braunton's Milk-vetch	<i>Astragalus brauntonii</i>	FE	No Effect	No Effect
Thread-leaved Brodiaea	<i>Brodiaea filifolia</i>	FT	No Effect	No Effect
Slender-horned Spineflower	<i>Dodecahema leptoceras</i>	FE	No Effect	No Effect
Santa Ana River Woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE	No Effect	No Effect
Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>	FT	No Effect	No Effect
Delhi Sands Flower-loving Fly	<i>Rhaphiomidas terminatus abdominalis</i>	FE	No Effect	No Effect
Riverside Fairy Shrimp	<i>Streptocephalus wooteni</i>	FE	No Effect	No Effect
Santa Ana Sucker	<i>Catostomus santaanae</i>	FT	No Effect	No Effect
Arroyo Toad	<i>Anaxyrus californicus</i>	FE	No Effect	No Effect
Mountain Yellow-Legged Frog	<i>Rana muscosa</i>	FE	No Effect	No Effect
Southwestern Willow Flycatcher	<i>Empidonax traillii eximius</i>	FE	No Effect	No Effect
California Condor	<i>Gymnogyps californianus</i>	FE	No Effect	No Effect
Coastal California Gnatcatcher	<i>Polioptila californica californica</i>	FT	No Effect	No Effect
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	FE	No Effect	No Effect
San Bernardino Merriam's Kangaroo Rat	<i>Dipodomys merriami parvus</i>	FE	No Effect	No Effect
Stephens' Kangaroo Rat	<i>Dipodomys stephensi</i>	FE	No Effect	No Effect
*FE = Federal Endangered; FT = Federal Threatened.				

San Bernardino Kangaroo Rat

Temporary

The project is adjacent to suitable habitat, but the limits of disturbance remain outside of it. Therefore, no temporary direct impacts are anticipated on San Bernardino kangaroo rat suitable habitat and critical habitat (**Figure 2-56**) with Primary Constituent Elements (PCEs) with the implementation of avoidance and minimization efforts provided below. Temporary impacts shown in **Table 2-98** would be limited to indirect impacts associated with those actions described above, including noise, nighttime lighting, and trash. The temporary impacts on San Bernardino kangaroo rat critical habitat are based on conservative preliminary design estimates to allow for flexibility of temporary construction work areas during the final design phase of the project. The actual temporary impacts on San Bernardino kangaroo rat critical habitat would likely be refined from those described in the January 2018 *Natural Environment Study Report* during the Design-Build phase of the project (**Table 2-98**). Any change in impact areas would be provided to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices.

Table 2-98. Impacts on San Bernardino Kangaroo Rat Critical Habitat

	Permanent Impact (acre)	Temporary Impact (acre)
Critical habitat with PCEs	0.00	1.95
Critical habitat without PCEs*	0.00	1.66
Total	0.00	3.61
*Critical habitat not containing the Primary Constituent Elements (PCEs) for San Bernardino kangaroo rat includes developed areas, paved roads, and public infrastructure.		

Permanent

The project would not result in any permanent impacts on San Bernardino kangaroo rat potentially suitable habitat that could support this species, or critical habitat with PCEs. Although critical habitat and suitable habitat occurs within the BSA, it is located outside the limits of disturbance and is separated from the limits of disturbance by the existing road grade having imported, unsuitable soils and unsuitable vegetative barriers consisting of dense non-native grasses. In addition, where suitable habitat is adjacent to the limits of disturbance, the project is limited to striping, signage installation and relocation, and (potentially) utility trenching that would be limited to the existing shoulder. As such, no direct impacts on individual San Bernardino kangaroo rats, suitable habitat, or critical habitat with PCEs would occur.

Construction monitoring by a USFWS-authorized biologist will ensure compliance with project avoidance and minimizations measure. Establishing ESAs will prevent disturbance from construction-related activities on potentially suitable habitat that is adjacent to the project limits of disturbance. Limiting nighttime work and using light shields when necessary will prevent light intrusion into potentially suitable habitat, reducing disturbance to any San Bernardino kangaroo rat that may be present outside of the limits of disturbance and avoiding attracting predators to the area. Prohibiting pets and the use of harmful chemicals will reduce potential mortality risks to any San Bernardino kangaroo rat that may be present outside of the limits of disturbance.

Proper storage and removal of trash and prohibiting spoils and rubble within the project site will prevent attracting potential predators of San Bernardino kangaroo rat to the area.

Because the project will avoid critical habitat with PCEs and avoidance and minimization efforts will be employed for San Bernardino kangaroo rat, it is Caltrans' determination that the project would have no effect on San Bernardino kangaroo rat or its critical habitat.

Multiple Species Habitat Conservation Plan

No impacts on Delhi Sands flower-loving fly or fairy shrimp habitat would occur as a result of the project. Consequently, a DBESP would not be required per Section 6.1.2 of the MSHCP. No further action is needed.

A meeting was held on January 19, 2016 with the Western Riverside County Regional Conservation Authority (RCA), USFWS, and CDFW to introduce the project and address project consistency with the MSHCP. During the meeting, RCA confirmed that the project was not subject to the Joint Project Review (JPR) process. The NES document was transmitted to USFWS and CDFW for consistency review on February 20, 2018. An email was received from the USFWS on June 5, 2018, on behalf of both USFWS and CDFW, confirming the I-15 Corridor project to be consistent with the MSHCP. A copy of the email is included in Section 4.4 of this Environmental Document.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

San Bernardino Kangaroo Rat

The following measures specific to the San Bernardino kangaroo rat will be incorporated to avoid and minimize impacts on suitable habitat for this species:

- ES-1** A USFWS-authorized biologist with knowledge of San Bernardino kangaroo rat and its habitat will function as a biological monitor. Prior to initiating project activities, the name(s) and resumes of all prospective authorized biologists will be submitted to the Palm Springs Fish and Wildlife Office (PSFWO). The authorized biologist will ensure compliance with the project avoidance and minimizations measures and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The authorized biologist will report any noncompliance immediately to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices.
- ES-2** A USFWS-authorized biologist will be present onsite during construction within and adjacent to suitable and/or critical habitat to ensure that avoidance and minimization measures are in place according to specifications. The biologist will also monitor construction within the vicinity of San Bernardino kangaroo rat habitat at a frequency that will be determined prior to the beginning of construction, during the Pre-Construction Meeting, to ensure that avoidance and minimization measures are properly followed. The authorized biologist will report any noncompliance immediately to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices.

- ES-3** A Biological Resource Information (BRI) program for all construction personnel will be developed and implemented prior to construction. At a minimum, the program would include the following topics: (1) biology, conservation, and legal status of the San Bernardino kangaroo rat and its critical habitat; (2) responsibilities of the biological monitor; (3) delineation and flagging of adjacent habitat; (4) limitations on all movement of those employed onsite, including ingress and egress of equipment and personnel, to designated construction zones (personnel shall not be allowed access to adjacent sensitive habitats); (5) onsite pet prohibitions; (6) use of trash containers for disposal and removal of trash; and (7) project features designed to reduce the impacts on listed species and habitat and promote continued successful occupation of adjacent habitat areas.
- ES-4** A preconstruction notification will be provided to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices in writing at least five days prior to project initiation.
- ES-5** Prior to ground disturbance in sensitive areas, limits of disturbance will be delineated and marked to be clearly visible to personnel on foot and in heavy equipment. All construction-related activities (e.g., vegetation removal, grading, equipment lay-down and storage, and contractor parking) will occur inside the limits of disturbance. Construction staging and equipment storage will be located outside of any potential habitat areas. All movement of contractors, subcontractors, or their agents and equipment will be restricted to the limits of disturbance, staging areas, and construction access routes.
- ES-6** Prior to clearing or construction, a fence plan will be submitted to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices for their approval. The authorized biologist experienced with San Bernardino kangaroo rat will be present onsite when the fence is installed to minimize the disturbance of San Bernardino kangaroo rat burrows from the fence installation. An exclusion fence design will be submitted to the PSFWO for approval at least 30 days prior to emplacement. The San Bernardino kangaroo rat exclusionary fencing will be inspected by the biological monitor at a frequency necessary to ensure that it is in place and properly maintained. Exclusion fencing will remain in place and be maintained until project construction is completed.
- ES-7** Prior to clearing or construction, exclusion fencing will be installed around all San Bernardino kangaroo rat suitable habitat areas that will be avoided and are adjacent to the limits of disturbance and within the existing state right-of-way. No grading or fill activity of any type will be permitted within these areas. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within these areas. All construction equipment should be operated in a manner to prevent accidental damage to nearby avoidance areas. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where San Bernardino kangaroo rat suitable habitat vegetation is immediately adjacent to planned grading activities.

- ES-8** To the extent feasible, no nighttime work will be conducted in the area of San Bernardino kangaroo rat habitat; however, nighttime construction may be allowed on the roadways above the elevation of occupied habitat or in other areas where lighting will not affect San Bernardino kangaroo rat. If the work has to be performed during night time, then the lights will be shielded and/or directed away from the habitat to prevent light intrusion into the habitat area.
- ES-9** A USFWS-approved authorized biologist and/or designated biologist will serve as the contact source for any personnel who might inadvertently kill or injure a San Bernardino kangaroo rat or who finds a dead, injured, or entrapped individual. The authorized biologist and/or designated biologist will be identified within the BRI. The designated authorized biologist's and/or designated biologist's name and telephone number will be provided to PSFWO.
- ES-10** Any personnel who inadvertently kill or injure a San Bernardino kangaroo rat will immediately report the incident to the authorized biologist and/or designated biologist, who will notify PSFWO immediately and in writing within three working days. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal, as well as any other pertinent information.
- ES-11** No pets will be allowed in, or adjacent to, the project site.
- ES-12** Rodenticides, herbicides, insecticides, or other chemicals that could potentially harm San Bernardino kangaroo rat will not be used.
- ES-13** Trash will be stored in closed containers so that it is not readily accessible to scavengers and will be removed from the construction site on a daily basis so as not to attract potential San Bernardino kangaroo rat predators.
- ES-14** Spoils and rubble will not be deposited outside the identified limits of disturbance and material waste generated by the project will be disposed of offsite.

2.3.6 Invasive Species

2.3.6.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed (EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the State’s invasive species list maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

2.3.6.2 Affected Environment

The primary source used in preparing this section is the January 2018 *Natural Environment Study Report*.

During the field surveys conducted for the project, all plant species observed within the BSA, i.e., the 300-foot buffer from the limits of disturbance, were recorded and a list was compiled. Included in the floral list are species classified as invasive by the California Invasive Plant Council (Cal-IPC). These species invade natural communities throughout California and can replace native habitat or limit native colonization in disturbed habitat. For the purposes of this IS/EA, the term “invasive exotic plant” refers to all species that occur as High, Moderate, or Limited on the Cal-IPC plant inventory (Cal-IPC 2016).

Exotic plant species exist within the non-native plant communities, within patches of native plant communities, landscaped areas, and in areas that have been disturbed by human uses throughout the BSA. Exotic species are typically more numerous adjacent to I-15 and in disturbed areas. Based on the Cal-IPC classification, 33 species of plants observed within the BSA are classified as invasive exotic plant species (**Table 2-99**). Invasive species that have severe ecological effects are given a rating of High and are identified in **Table 2-99**.

Table 2-99. Cal-IPC Classified Invasive Species Observed within the BSA

Scientific Name	Common Name	Cal-IPC Rating
Eudicots		
Aizoaceae – Fig-marigold Family		
<i>Mesembryanthemum crystallinum</i>	crystalline iceplant	Moderate
Anacardiaceae – Sumac or Cashew Family		
<i>Schinus molle</i>	Peruvian pepper tree	Limited
Asteraceae – Sunflower Family		
<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	Moderate
<i>Centaurea melitensis</i>	toalote	Moderate
<i>Centaurea solstitialis</i>	yellow starthistle	High
<i>Hypochaeris glabra</i>	smooth cat's-ear	Limited
Aquifoliaceae – Holly Family		
<i>Ilex aquifolium</i>	English holly	Moderate
Brassicaceae – Mustard Family		
<i>Brassica tournefortii</i>	Sahara mustard	High
<i>Hirschfeldia incana</i>	shortpod mustard	Moderate
<i>Sisymbrium irio</i>	London rocket	Moderate
Euphorbiaceae – Spurge Family		
<i>Ricinus communis</i>	castorbean	Limited
Fabaceae – Legume Family		
<i>Robinia pseudoacacia</i>	black locust	Limited
<i>Trifolium hirtum</i>	rose clover	Moderate
Geraniaceae – Geranium Family		
<i>Erodium cicutarium</i>	redstem filaree	Limited

Table 2-99. Cal-IPC Classified Invasive Species Observed within the BSA (continued)

Scientific Name	Common Name	Cal-IPC Rating
Lamiaceae – Mint Family		
<i>Marrubium vulgare</i>	horehound	Limited
Lythraceae – Loosestrife Family		
<i>Lythrum hyssopifolia</i>	grass poly	Limited
Moraceae – Fig Family		
<i>Ficus carica</i>	edible fig	Moderate
Oleaceae – Olive Family		
<i>Olea europea</i>	olive	Limited
Plantaginaceae – Plantain Family		
<i>Plantago lanceolata</i>	English plantain	Limited
Polygonaceae – Buckwheat Family		
<i>Rumex crispus</i>	curly dock	Limited
Scrophulariaceae – Figwort Family		
<i>Verbascum thapsus</i>	woolly mullein	Limited
Simaroubaceae – Quassia or Simarouba Family		
<i>Ailanthus altissima</i>	tree of heaven	Moderate
Solanaceae – Nightshade Family		
<i>Nicotiana glauca</i>	tree tobacco	Moderate
Monocots		
Arecaceae – Palm Family		
<i>Phoenix canariensis</i>	Canary Island palm	Limited
<i>Washingtonia robusta</i>	Mexican fan palm	Moderate
Poaceae – Grass Family		
<i>Avena barbata</i>	slender wild oat	Moderate
<i>Avena fatua</i>	wild oat	Moderate
<i>Bromus diandrus</i>	ripgut brome	Moderate
<i>Bromus tectorum</i>	cheat grass	High
<i>Cynodon dactylon</i>	Bermuda grass	Moderate
<i>Festuca myuros</i>	rattail fescue	Moderate
<i>Hordeum murinum</i>	wall barley	Moderate
<i>Schismus barbatus</i>	Mediterranean schismus	Limited

2.3.6.3 Environmental Consequences

No Build Alternative

The No Build Alternative would not provide improvements on the I-15 within project limits, and as such, no impacts related to invasive species would result. Existing and projected traffic congestion would not be alleviated.

Build Alternative

Temporary

Non-native invasive plant species could be introduced and/or spread throughout the BSA during project construction via construction equipment, vehicles, or imported materials. This could lead to competition of invasive plant species with native plant species for resources such as water and space. In addition, natural communities could become monotypic, thereby reducing their quality and diversity.

Permanent

The Build Alternative may include landscaping of the slopes adjacent to the proposed interchange improvements. In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, none of the species on the California list of invasive species would be used during the project for erosion control or landscaping. All equipment and materials would be inspected for the presence of invasive species and cleaned if necessary. In areas of particular sensitivity, extra precautions would be taken if invasive species were 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. Implementing the avoidance and minimization measures listed below would ensure that impacts from invasive plant species are minimal.

A weed abatement plan will be developed to minimize the spread and importation of non-native plant material during and after construction in compliance with EO 13112.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

IS-1 The following avoidance and minimization measures will be implemented:

- a Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. The cleaning of equipment will occur at least 300 feet from ESA fencing.
- b Fill material will be obtained from weed-free sources.
- c Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
- d Following construction, temporarily-impacted areas adjacent to native vegetation would be revegetated with native plant species approved by the District Biologist.
- e Following construction, all revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory.
- f Eradication procedures (e.g., spraying and/or hand weeding) will be included in the plan. If invasive plants are established, then the use of herbicides will be

prohibited within, and adjacent to, native vegetation except as specifically authorized by the Department Biologist.

- g Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth.
- h Vegetation will be covered while being carried on trucks, and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

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.

2.4.2 Methodology

This cumulative impact analysis was prepared in accordance with the 2005 guidance developed by Caltrans in conjunction with the FHWA and the United States EPA. Consistent with that guidance, the extent of analysis is based on the size and type of the project proposed, its location, potential for direct and indirect impacts on environmental resources, and the health of any potentially affected resource. The following eight steps summarize the process and approach to this analysis:

1. Identify/define the project-specific resources to consider in a cumulative effect analysis. List each resource area for which the project could cause direct or indirect impacts. If a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource, and need not be further evaluated.
2. Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
3. Describe the current health and the historical context of each resource.
4. Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.

5. Identify the set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.
6. Assess the potential cumulative impacts.
7. Report the results of the cumulative impact analysis.
8. Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact

As stated in the eight-step process summarized above, if a proposed project would not cause direct or indirect impacts on a resource, the project would not contribute to a cumulative impact on that resource, and, therefore, that resource would not need to be further evaluated with respect to determining whether the proposed project would result in a potential cumulative impact.

Based on the analysis completed for the resources listed below, it was determined that the proposed project would not result in direct or indirect impacts to these resources; accordingly, these resources were not included in the cumulative impact analysis for this project:

- Farmland/Timberlands
- Community Character and Cohesion
- Cultural Resources
- Hydrology/Floodplains
- Geology/Soils

2.4.3 Cumulative Impact Analysis

A list of the reasonably foreseeable projects associated with the cumulative impacts analysis is presented in **Table 2-100**. The locations of those projects are shown in **Figure 2-57** and **Figure 2-58**. The definition of the RSA for each of the respective resources addressed determines which projects are included in the associated analysis.

The following were evaluated for potential cumulative impacts:

- Traffic and Transportation
- Visual/Aesthetics
- Water Quality and Storm Water Runoff
- Paleontological Resources
- Air Quality
- Noise
- Biological Resources

2.4.3.1 Human Environment: Traffic and Transportation

The RSA for the traffic and transportation impact analysis includes the project area, which encompasses 10 interchanges, including three major system (freeway-to-freeway) interchanges at SR-60, I-10, and SR-210; six existing local street interchanges; and one future local street interchange at Arrow Route. **Table 2-100** identifies past and present, or foreseeable future transportation projects that would affect the traffic and transportation conditions within the project area.

According to the traffic study prepared for the project, the capacity of 1,650 vehicles per lane per hour was used for the I-15 Express Lanes would result in a minimum operating speed of 45 miles per hour (mph). The construction of the Express Lanes would not have an adverse impact on the existing general travel lanes, but would improve general travel conditions. Even though it is anticipated that the project would draw additional vehicle traffic because of the overall improvements in travel conditions, the analysis found that the travel conditions in the existing general traffic lanes in the open-to-traffic year of 2024 and horizon year of 2045 would improve. Although segments of the general lanes within the project limits were found to operate at an unacceptable level of service of D, the segments would have a lower traffic volume under the Build Alternative compared with the No Build Alternative condition, which would result in improved traffic flow. In conclusion, the analysis of impacts under the Build Alternative shows that travel demand would increase within the I-15 CP. By 2024, parts of the project area would experience travel speeds below 20 mph during the peak periods. With the Build Alternative, the prevailing speed would be more than 50 mph in the GP lanes and more than 60 mph in the Express Lanes in 2024. With the Build Alternative, the addition of Express Lanes would provide improved traffic conditions for future traffic demand in all NB locations and in nearly all SB locations of the GP lanes. Speeds in the GP lanes would be low in a few bottleneck locations, but travel times would be considerably shorter compared with the No Build Alternative. Moreover, the Build Alternative would provide drivers with a reliable travel option at 60 mph or more when using the Express Lanes. The project would result in minimal adverse effects on surface street intersections and ramps in 2024 and 2045.

The transportation system in the Southern California region consists of a multi-modal network of roads and highways, public transit, and rail facilities. The transportation system is planned to support the region's economic needs as well as the demand for personal travel. The 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) lists several thousand transportation projects for meeting the increase in transportation demand and improving the region's mobility while, at the same time, meeting the goals for air quality and revitalizing the economy. Several tolled express lanes have been completed, as well as planned projects in the Inland Empire area, in addition to the I-15 CP, including the I-10 CP, RCTC I-15 TEL Project, and the SR-91 CIP Project, which would add a total of 49.5 linear miles of tolled express lanes in the Inland Empire area.

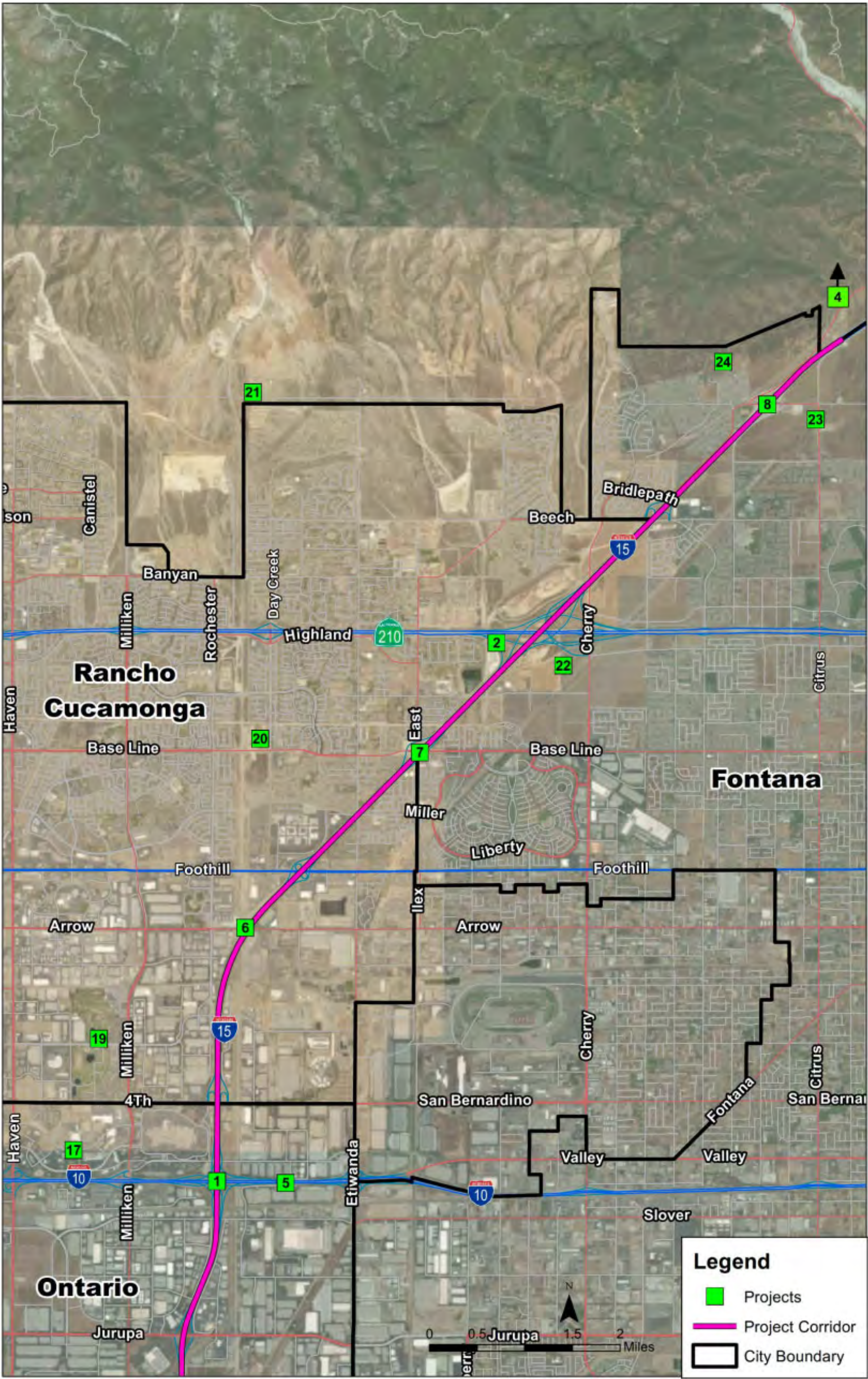
Table 2-100. Cumulative Impact Analysis Projects and Plans List

Agency	ID #	Project Name	Location	Description	Status
Transportation Projects					
Caltrans	1	Landscape	I-15/I-10 Interchange	Native tree planting and placing of inert material.	Started construction in 2011, with anticipated completion in 2016. http://www.dot.ca.gov/d8/index.html . Accessed 2017.
	2	Storm Drain	On I-15 near SR-210 Interchange	Construct master planned storm drain facility at SBD Post Mile 11.1.	Ready to List Project. http://www.dot.ca.gov/d8/index.html . Accessed 2017.
RCTC	3	I-15 Tolloed Express Lanes Project	Between the I-15/Cajalco Road interchange and the I-15/SR-60 interchange	Construct one to two tolled express lanes in each direction.	The project environmental document was approved in May 2016. The project is under construction. http://www.rctc.org/projects/interstate-15/i-15-corridor-improvement-project . Accessed 2017.
SBCTA	4	I-15/I-215 Interchange Improvements	The junction of I-15 and I-215 near Devore	Improves the interchange by adding lanes to reduce weaving and by the addition of truck lanes.	Environmental document (Initial Study/Environmental Assessment [IS/EA]) was completed in 2010. Project is under construction until middle of 2016. http://www.devoreinterchangeproject.com/ . Accessed 2017.
SBCTA	5	I-10 CP	Los Angeles/San Bernardino County line to Ford Street in San Bernardino County	The project proposes to widen the corridor (a distance of 33 miles), providing two Express Lanes in each direction from the Los Angeles County limits to California Street near SR-210 in the City of Redlands, San Bernardino County.	Draft environmental document (Environmental Impact Report/ Environmental Impact Statement [EIR/EIS]) was completed in April 2016. Environmental document was approved in July 2017. Construction of that portion between the Los Angeles County line and I-15 is anticipated to be completed early 2022. http://www.sanbag.ca.gov/projects/mi_fwy_i-10-corridor.html . Accessed 2017.
SBCTA	6	I-15/Arrow Route IC	City of Rancho Cucamonga	New interchange	Information not available.
SBCTA/ City of Rancho Cucamonga	7	I-15 Baseline Interchange Improvement	Located within the City of Rancho Cucamonga (west of the I-15) and the City of Fontana (east of the I-15)	Widen Baseline Road and East Avenue, reconfigure the I-15 NB and SB on- and off-ramps, and provide water-efficient landscaping in the interchange area.	The environmental document (IS/EA) was approved in 2011. The project construction was completed in 2017. http://www.sanbag.ca.gov/projects/interchange_baseline.html . Accessed 2017.
City of Fontana	8	I-15/Duncan Canyon Road Interchange	Duncan Canyon Road Overcrossing, south of I-15/Sierra Avenue Interchange and north of I-15/Summit Avenue Interchange	Construct a new interchange at Duncan Canyon Road and widen the overcrossing.	Environmental document (IS/EA) was approved in 2009. Construction started August 13, 2012, and completed in 2016. http://www.fontana.org/documentcenter/view/3645 . Accessed 2017.
Development Projects					
City of Eastvale	9	Goodman Commerce Center	Bounded by Cantu-Galleano Ranch Road on the north, I-15 on the east, Bellegrave Avenue on the south, and Hamner Avenue on the west	Approximately 205 acres of commercial retail, business park, warehouse, hospital, and industrial development.	The EIR was approved in 2014, and groundbreaking was in 2015. The timing of the final design and build-out of the project depends on market conditions. http://www.eastvaleca.gov/home/showdocument?id=3151 http://www.eastvaleca.gov/home/showdocument?id=3203 http://www.eastvaleca.gov/city-hall/economic-development/project-site-maps . Accessed 2017.
	10	Industrial Development	Located at the southeast corner of Hamner Avenue and Riverside Drive	Development of two industrial buildings totaling 156,478 square feet on two parcels within a net area of approximately 7.32 acres.	Completed addendum to Mitigated Negative Declaration and construction plans were provided to the City in spring of 2016. http://www.eastvaleca.gov/home/showdocument?id=4873 . Accessed 2017.
	11	LBA Realty Development	Located at the northeast corner of Cantu-Galleano Ranch Road and Hamner Avenue	Construction and operation of a new 446,173-square-foot industrial warehouse building, parking, utility and storm water infrastructure, and landscaping on approximately 24 acres.	Draft EIR was approved in April 2016, Response to comments and Final EIR is being prepared. Construction plans were submitted to the City. http://www.eastvaleca.gov/home/showdocument?id=4873 http://www.eastvaleca.gov/home/showdocument?id=4261 . Accessed 2017.
	12	Costco Major Development Review and Conditional Use Permit	Located on Hamner Avenue with the western boundary abutting the City of Ontario city boundary	Major Development Review for construction of an approximately 158,000-square-foot Costco warehouse building with a tire center and outdoor food court area at the commercial portion of the Goodman Commerce Center on 16 acres. Two Conditional Use Permits required for operation of the tire center and the sale of alcohol. The tire center would include retail sales and an installation area that would occupy approximately 5,200 square feet of the building. A fueling station and car wash are proposed directly off Hamner Avenue.	Approved by Planning Commission on November 16, 2016. Construction to begin spring of 2018 and the store would be open in fall of 2018 (City of Eastvale 2017).
	13	Cloverdale Marketplace – Phase II	Located on the corner of Riverside Drive and Hamner Avenue	A 130,000-square-foot neighborhood shopping center on 4 acres.	Under construction (SRA 2017).
	14	Hamner Logistics Center Riverside Building	Located on the corner of Riverside Drive and Hamner Avenue	A 41,026-square-foot development with office space and parking on 2.62 acres.	Under construction (CBRE 2016a).

Table 2-100. Cumulative Impact Analysis Projects and Plans List (continued)

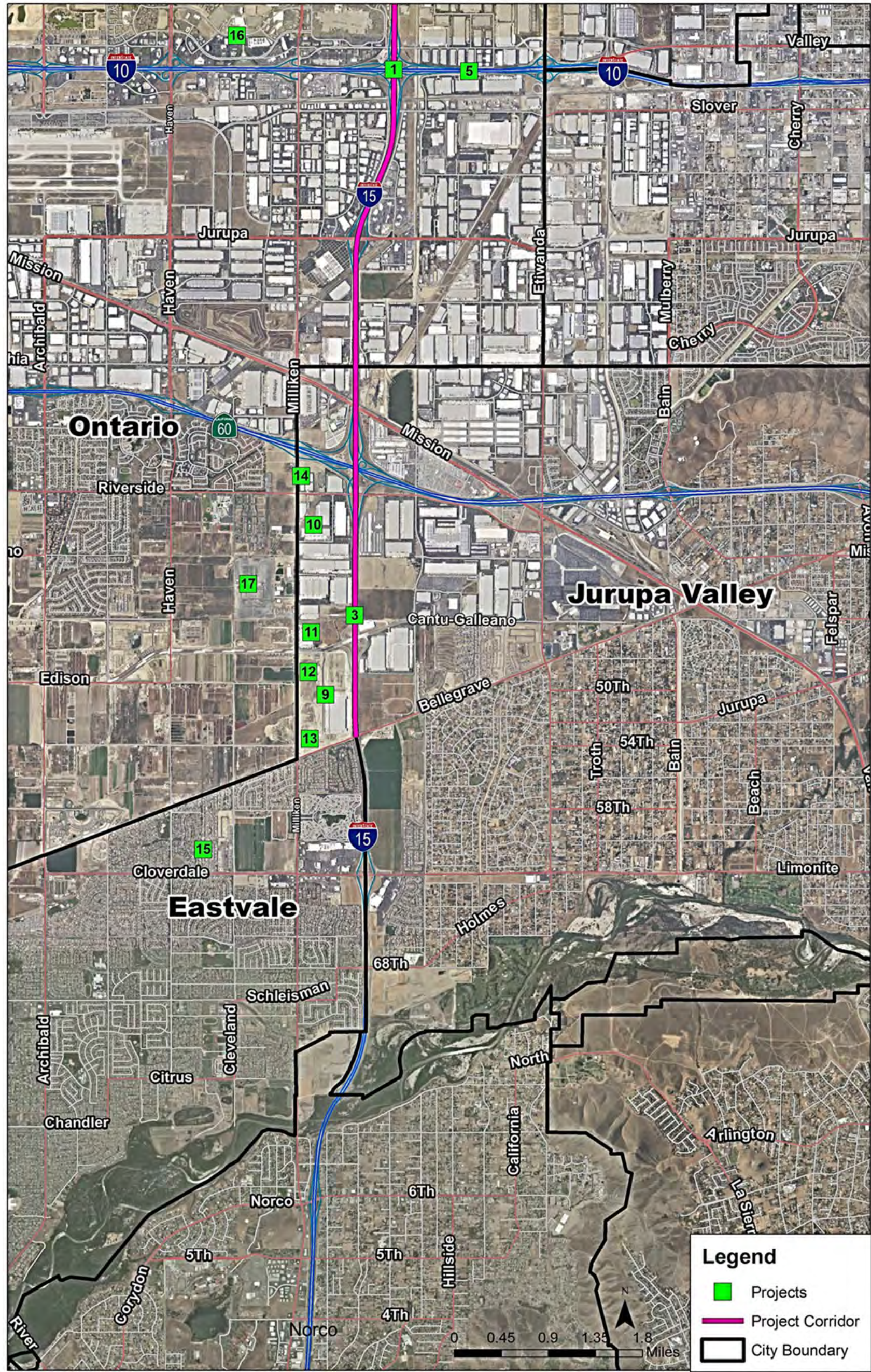
Agency	ID #	Project Name	Location	Description	Status
	15	Hamner Logistic Center Hamner Building	Located on the corner of Limonite Avenue and Sumner Avenue	A 115,452-square-foot development with office space, 127 parking stalls, and other facilities on 9.31 acres.	Under construction (CBRE 2016b).
	16	Eastvale Marketplace	Located on the corner of Riverside Drive and Hamner Avenue	A 71,472-square-foot neighborhood retail center with multi-tenant and single-tenant buildings and associated parking facilities on 7.64 acres.	Conditionally approved by the Planning Commission on November 18, 2015 (City of Eastvale 2015)
City of Ontario	17	Ontario Center Specific Plan	The specific plan limits begin at Milliken Avenue on the east, bounded by Turner Avenue on the west, Fourth Street on the north, and I-10 on the south.	Comprises 549 acres of commercial and retail services, entertainment facilities, light industry, and housing developments.	The Specific Plan was approved in 1981. No environmental documents available. http://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/ontario-center
	18	Ontario Ranch	Located within the boundaries of Hamner Avenue, Riverside Drive, and Vineyard Avenue	Consists of 12 planning areas for residential, commercial, and industrial land development. There is an overall approved development within 2,960 acres that includes 10,231 single-family residential units, 6,132 multi-family residential units, a 525,720-square-foot commercial use, and a 550,000-square-foot business park. In process are applications for 447 acres that include 1,568 single-family residential units and a 1,951,146-square-foot industrial park	EIR was approved for most of the planning areas between the years 2005 and 2007, except for some that were approved in 2013 and 2015, or are in the approval process. http://www.ontarioca.gov/planning/ontario-ranch http://www.ontarioca.gov/planning/reports/environmental-impact-reports . Accessed 2017.
City of Rancho Cucamonga	19	Empire Lakes/ Rancho Cucamonga Industrial Area Specific Plan, Amendment	North of 4th Street, west of Milliken Avenue, east of Cleveland Avenue, and south of 8th Street and the BNSF/ Metrolink rail line (approximately 1 mile east of the project location)	Amends the "Empire Lakes Specific Plan" to allow future "redevelopment" of the golf course with a mixed-use project of high-density residential, commercial, and office use. Project intends to incorporate use of active transportation and transit.	Final EIR was approved in April 2016. The timing of the final design and build-out of the project would depend on market conditions. https://www.cityofrc.us/cityhall/planning/current_projects/empire_lakes_specific_plan_project/default.asp . Accessed 2017.
	20	Day Creek Square	Located at the southwest corner of Day Creek Boulevard and Baseline Road	A total of 380 residential units, including attached and detached homes, a 71-room hotel, and two restaurant pads, totaling approximately 12,000 square feet on 28.4 acres of land.	The project was approved by the Planning Commission in June 2017 and by the City Council in July 2017. https://www.cityofrc.us/cityhall/planning/current_projects/day_creek_square/default.asp
	21	North Eastern Sphere Annexation Project	Extends from Haven Avenue, easterly to the City's boundary with Fontana, and from the northerly City limits to the National Forest boundary	Development of a residential "village" on 1,200 acres of land, with a mix of residential, neighborhood retail and service commercial, and public uses.	The North Eastern Sphere Annexation proposal is being reevaluated and is anticipated to be scheduled for Planning Commission and City Council during the first quarter of 2019. https://www.cityofrc.us/cityhall/planning/current_projects/north_eastern_sphere_annexation_specific_plan/default.asp
City of Fontana	22	Westgate Specific Plan	Adjacent to I-15 between I-15/Baseline Road and I-15/Summit Avenue interchanges	Westgate Specific Plan encompasses 964 acres. The Plan provides a broad range of uses including residential, schools, retail, office, business, and open space. The residential uses provide a range of single family detached, attached, stacked flats and multi-family homes of maximum 4,660 units.	Two major development projects have been completed within the Plan boundary: Falcon Ridge Town Center with 415,000 square feet of retail uses, and Caltrans' 124,000-square-foot Transportation Management and Southern Regional Lab Facilities. Final Program EIR that amends the plan boundaries and land use distribution was approved in 2015. The timing of the final design and build-out of the project depends on market conditions. http://www.fontana.org/index.aspx?nid=2612 http://www.fontana.org/documentcenter/view/10503 . Accessed 2017.
	23	Ventana at Duncan Canyon Specific Plan	Bounded by the I-15 freeway on the north and west, Citrus Avenue on the east, and SCE power line transmission corridor on the south.	The Ventana at Duncan Canyon Specific Plan includes a corporate office corridor located adjacent to the I-15 freeway, both north and south of Duncan Canyon Road. The corridor would include mid-rise offices, multi-story buildings, hotels, quality business restaurants, and 842 residential units.	The plan and EIR were approved in 2007, but the area remains mostly undeveloped. http://www.fontana.org/index.aspx?nid=1301 . Accessed 2017.
	24	Monarch Hills Residential Development	Located at northeast corner of Lytle Creek Road and Duncan Canyon Road	Development of 472 residential units on 136.4 acres.	Notice of preparation released and information meeting occurred November 16, 2016. https://www.fontana.org/DocumentCenter/View/18407 . Accessed: 2017.

Figure 2-57. I-15 Corridor Project Cumulative Impact Analysis Projects and Plans Location Map – North



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Figure 2-58. I-15 Corridor Project Cumulative Impact Analysis Projects and Plans Location Map – South



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The I-15 CP is expected to result in improvements to local and regional mobility, providing some relief from congestion. Additionally, accrued revenue from the tolled express lane projects that is over and above what is needed for bond repayment and the operation and maintenance needs of the tolled express lanes will be available as funding support for future transportation improvements that are located within the areas of the respective tolled express lane projects.

Through dynamic congestion pricing, the proposed tolled express lanes projects are anticipated to maintain optimal traffic flow, but also encourage the use of carpools. Express lanes would be price-managed; therefore, only vehicles that do not meet the minimum occupancy requirements would be required to pay a toll.

This project, along with other planned transportation projects, is anticipated to improve mobility within the region. It is not anticipated that the project would contribute to adverse impacts on traffic conditions and transportation facilities.

Construction

Temporary impacts may result from closures of freeway lanes, ramps, and local roadways during construction of the project. The Build Alternative would affect existing structures along the I-15 corridor, including several local road undercrossings. Pedestrian and bicycle routes within the project limits could be temporarily affected during project construction as a result of local road detours and closures. Temporary and short-term traffic closures and detours during construction could result in impacts on access and circulation for police, fire, and other emergency services. As discussed in Section 3.2.2, construction activities associated with the Etiwanda Overhead would result in short-term closure of the Pacific Electric Trail during nighttime hours; however, the trail would remain open during the majority of the construction period.

It is anticipated that traffic and circulation impacts due to construction activities would be short-term and minimized with the implementation of the Transportation Management Plan (TMP) developed for the project. Elements of the TMP would include early and continuous coordination with local jurisdictions, school districts, and the general public regarding work schedules, closures, and detour routes. Coordination would occur with local agencies regarding potential impacts, including impacts on pedestrian and bicycle routes. Preliminary detour routes would be designated and signs posted for all traffic during closures. Work that would require roadway and freeway closures, such as the use of falsework or structure demolition, would occur mostly during nonpeak commute hours, at night, or on weekends. Access to nearby businesses would be maintained at all times during construction.

There are no known projects at this time that are planned for construction within the same period as this project. However, if conditions change and multiple projects are considered for construction within the same time period, temporary cumulative traffic and circulation impacts could occur as a result of construction activities. Coordination regarding construction activities and any needed roadway closures and detours would take place to avoid impacts on the local communities and the traveling public from multiple construction activities occurring at the same time. With implementation of the TMP prepared for the project, there would be a minimal impact on traffic and circulation due to project construction activities.

2.4.3.2 Human Environment: Visual and Aesthetic Resources

The RSA for visual and aesthetic resources includes the I-15 corridor within the project area and the scenic resources that can be seen from the project area. The project limits traverse the cities of Eastvale and Jurupa Valley in Riverside County, and Ontario, Rancho Cucamonga, and Fontana in San Bernardino County. The landscape is characterized by the generally flat, semi-arid valley floor, which is bounded by the forested high mountain areas of the San Gabriel Mountains (northwest), the San Bernardino Mountains (northeast), Chino Hills (southwest), Santa Ana Mountains (south), and Jurupa Hills (southeast). The land use within the study area is primarily urban, with a mix of large- and small-scale industrial buildings in the southern portion of the project area, large- and small-scale commercial developments in the central portion of the project area, and residential communities in the northern portion of the project area.

I-15 is a prominent visual element within the landscape because of its size and connections with other major east–west freeway systems. Scenic resources within, or viewed from, the project corridor include visually prominent open space and topographic features, such as the mountains and local hills. The project segment of I-15, which is within the valley region of San Bernardino County and Riverside County, is not a designated State Scenic Highway.

The project would not construct any new large structures or other structures that would be dominant or prominent beyond the existing character of the project corridor. The proposed improvements would not obstruct scenic resources available from the corridor. The project would add Express Lanes to the existing paved center median. The design would be consistent with the existing freeway, compatible with the existing urban transportation facility, and in keeping with the viewer group’s expectations for the I-15 visual environment. The new improvements would follow the alignment, profile, color, and texture of the existing freeway. The Build Alternative would not expand beyond the existing right of way limits. It is not anticipated that the visual quality of the corridor would be affected as a result of construction of the project. Viewers who may be influenced by the visual changes resulting from the project include mostly the various types of motorists and residents in the neighboring communities. It is anticipated that the project would have a moderate to low impact on motorists. A moderate impact would be anticipated on a small group of viewers, limited to residents who are immediately adjacent to I-15 and recreational users of the Pacific Electric Trail, along a short segment of I-15.

Implementation of proposed avoidance and minimization measures is anticipated to further reduce temporary and permanent impacts on visual quality and character. The avoidance and minimization measures include implementing BMPs for dust control; setting up construction staging areas out of sight of major viewers; shielding construction lighting; restoring construction staging areas to pre-project conditions; minimizing impacts on vegetation and slopes; and applying aesthetic treatment to structures, such as walls and bridge abutments.

The corridor is already developed as a highly urbanized facility. It is not anticipated that the proposed project would add to cumulative impacts on visual and aesthetic quality, character, or resources.

2.4.3.3 Physical Environment: Water Quality

The project would be designed and implemented according to Clean Water Act Section 402, Caltrans' National Pollutant Discharge Elimination System (NPDES) Permit, and Stormwater Management Program requirements to the maximum extent practicable during construction and operational phases. The project would not result in adverse impacts due to storm water runoff and would not contribute to cumulative adverse impacts on the water quality of receiving waters.

The proposed project is within the Santa Ana River watershed and the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). The project area is within the urban municipal separate storm water sewer system areas of the cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana. The primary project receiving and downstream water bodies are East Etiwanda Canyon Channel, Day Creek Channel, Santa Ana River Reach 3, Santa Ana River Reach 2, and Santa Ana River Reach 1.

The RSA for water quality includes the watersheds and receiving waters that are potentially affected by the project. Drainage from the project area boundary north of SR-60 would be discharged east into the Day Creek Channel, Etiwanda Creek Channel, or San Sevaine Channel. The project area south of SR-60 storm water flows west through the local drainage network. The receiving water bodies discharge into Santa Ana River Reach 3, which flows into Prado Basin. The proposed project is also adjacent to Victoria Basin and Wineville Basin; both facilities are owned by San Bernardino County Flood Control District (District) and provide flood control and groundwater recharge for irrigation, industrial, and municipal uses. Depth to groundwater in the project area ranges from approximately 650 feet at the northern end of the alignment to approximately 175 feet near the southern end of the alignment. Groundwater is at sufficient depths to avoid being affected by the project. This project would not discharge to Victoria Basin; therefore, there would be no impact on this basin from the proposed improvements. Also, the project would not directly discharge to Wineville Basin. The runoff from the proposed project would be conveyed into Caltrans storm drain systems, then into the city storm drain network prior to discharging into the Wineville Basin. The existing storm water facilities are adequate for conveying storm water from the project area. No project-related modifications to these facilities are required.

According to the 2012 Clean Water Act Section 303(d) list, Santa Ana River Reach 3 and Santa Ana River Reach 2 are the only receiving water bodies listed as impaired or with Total Maximum Daily Loads (TMDLs) established for them. Santa Ana River Reach 2 is 303(d) listed for impairment from indicator bacteria, but does not have any associated TMDLs. Santa Ana River Reach 3 is 303(d) listed for copper and lead pollutants and has a TMDL for pathogens. Based on the publicly available information, the Santa Ana RWQCB has not indicated that Caltrans facilities, including I-15, discharge to receiving water bodies that are causing or contributing to an exceedance of applicable standards.

Water quality impacts could result from soil disturbance associated with construction of the project. Permanent impacts could result from the increase in impervious areas and other changes that would increase the velocity and volume of downstream flow as well as hydromodification. The project would result in a Total Disturbed Soil Area of 160 acres and increase the impervious area by approximately 75 acres. A soil management plan would be required to address the

arsenic contamination identified beneath the Etiwanda Overhead. It is anticipated that with implementation of standard measures and requirements, there would be no impacts on water quality from hazardous materials on surface or groundwater resources as a result of the project's construction activities. No substantial impacts on water bodies identified as initial receivers from the project area are anticipated. The Day Creek and Etiwanda channels were evaluated for stream stability using the procedures outlined in the Caltrans Requirements Guidance, CTSW-OT-14-134.05 (June 2014). It was determined that the Day Creek and Etiwanda channels are fully concrete-lined throughout the entire reach; therefore, there is no risk to stream stability at these locations from the project area storm runoff. These creeks are engineered so they are not susceptible to hydromodification to the point of discharge into the downstream basin.⁹

The project would result in some localized increases in runoff due to an increase in impervious area. However, with implementation of treatment BMPs, the project would not have adverse impacts from the introduction of additional sediment discharge into downstream waters. The project would design and implement BMPs to treat 100 percent of increased runoff resulting from new impervious surfaces. BMPs would include biofiltration swales and biofiltration strips, as described in Caltrans' *Project Planning Design Guidance* (May 2016). A total of 21 infiltration areas are proposed, and retrofit of approximately 20 existing structural treatment devices is recommended to achieve post-construction treatment requirements for this project. Additional measures would include the design of the project to avoid soil erosion from steep slopes through minimization of cut-and-fill areas. This project would comply with all of Caltrans NPDES permit requirements and would not contribute to violations of water quality standards or objectives. The project would not have water quality impacts that would affect biological resources or beneficial uses of water resources.

2.4.3.4 Physical Environment: Paleontological Resources

The analysis of the potential impacts of the Build Alternative related to paleontological resources is provided in the February 2017 Combined Paleontological Identification Report/Paleontological Evaluation Report (PIR/PER). The findings of that analysis indicate that significant paleontological resources could be affected by the project, but that this is unlikely because of previous construction disturbances within the project footprint. Highly sensitive Pleistocene-age geological formations would be affected by the project. These may encompass significant paleontological resources if work takes place in areas that are not previously disturbed. The PIR/PER recommended preparation of a Paleontological Mitigation Plan (PMP) to mitigate possible impacts from the Build Alternative.

The RSA for paleontological resources is the disturbance limits of the Build Alternative. Excavations under the Build Alternative could disturb two fossiliferous Pleistocene formations: Young eolian deposits of Holocene and late Pleistocene age and Young alluvial-fan deposits of early Holocene and late Pleistocene age. However, all of the project footprint has already been disturbed at the surface by past excavations and construction, and much of the subsurface sediments were probably disturbed as well. Ground-disturbing activities for the Build Alternative may affect native material up to approximately 10 feet below ground surface within the project

⁹ San Bernardino County Stormwater Facility Mapping Tool (<http://permittrack.sbcounty.gov/wap/>).

limits, and earthwork to these depths would affect sensitive geological deposits if they were previously undisturbed.

The project is not expected to contribute to cumulative impacts to paleontological resources.

2.4.3.5 Physical Environment: Air Quality

The RSA for air quality is the South Coast Air Basin (SCAB). The SCAB experiences chronic exceedances of state and federal ambient air quality standards, however, the SCAB is in maintenance or attainment status for all criteria pollutants with the exception of Ozone and PM_{2.5}. The SCAQMD has prepared, and periodically updates, the SCAB's regional Air Quality Management Plan (AQMP) that sets forth a comprehensive and integrated program that would lead the Basin into compliance with the federal and state air quality standards. The proposed project is identified in the Southern California Association of Governments (SCAG) 2016–2040 RTP/SCS Amendment 1 under number 4122006. As such, it can be concluded that the project's operational emissions meet the transportation conformity requirements imposed by EPA and SCAQMD. In addition, operations-period criteria pollutant emissions were quantified using the CT-EMFAC2014 emissions estimation model to ascertain how project-related changes to VMT and travel speeds affect regional emissions. The SCAG 2016-2040 RTP/SCS Amendment 1 was found by FHWA and the FTA to conform to the State Implementation Plan. It is expected that the I-15 CP will not result in a cumulatively considerable contribution to SCAB air quality impacts.

2.4.3.6 Physical Environment: Noise

The RSA for noise includes those areas immediately adjacent to the project site. These areas include existing noise-sensitive land uses within 500 feet of the existing freeway, which may be affected by operation of the proposed project, and future planned noise sensitive land uses (identified below). Construction of the proposed project is anticipated to begin in 2021 and be completed in 2024. The predicted traffic noise levels for the design year (2045) No Build Alternative and Build Alternative conditions would approach or exceed the Noise Abatement Criteria level of 67 A-weighted decibels (dBA) hourly noise equivalent level (Leq[h]) for Category B and C land uses at 86 modeled land uses, representative of 113 frequent outdoor use areas, and 86 modeled land uses, representative of 136 frequent outdoor use areas, respectively. Predicted traffic noise levels for the design year (2045) No Build Alternative and Build Alternative conditions would also approach or exceed the Noise Abatement Criteria level of 72 dBA Leq(h) for Category E land uses at nine modeled land uses, representative of nine frequent outdoor use areas, under both conditions.

Changes in traffic noise levels between existing and future with-project conditions at noise-sensitive receptors would range from a 7-decibel (dB) decrease to a 6-dB increase. These increases include the cumulative effects of other projects located along the I-15 alignment, such as the Baseline Interchange Improvements Project, the I-10 CP, and the North Duncan Canyon Interchange Project, which were all included in the traffic noise analyses and modeling for the I-15 CP.

In comparing the design year Build Alternative condition (which includes the proposed project, all reasonably foreseeable projects [I-15/Baseline IC Project, I-15 Duncan Canyon IC Project, RCTC I-15 Express Lanes Project, and I-10 Corridor Project], and all other projects included in

the traffic study) to the design year No Build Alternative condition (which includes all reasonably foreseeable projects [I-15/Baseline IC Project, I-15 Duncan Canyon IC Project, RCTC I-15 Express Lanes Project, and I-10 Corridor Project] and all other projects included in the traffic study), the change in noise ranges from -3 to 4 dBA.

An increase of 3 or 4 dBA is considered to be barely perceptible to the human ear, while an increase of 5 dBA is generally perceived as a distinctly noticeable increase. Decreases in traffic noise associated with the proposed project are generally associated with the alteration of the surrounding geometry between the I-15 (source) and the modeled receptors. Examples of this type of alteration would be the construction of retaining walls and safety shapes or noise barriers included by the I-15/ Baseline Interchange Improvements Project. It is expected that the I-15 CP will not result in a cumulatively considerable contribution to noise impacts within the RSA.

2.4.3.7 Biological Environment: Natural Communities, Plant Species, Animal Species, and Threatened and Endangered Species

The RSA for natural communities includes a 300-foot buffer surrounding the project area, special-status plant and wildlife species include 300- to 500-foot buffer, and a 100- to 300-foot buffer for threatened and endangered species. This area considers the minimal, incremental effects of the Build Alternative on natural communities and special-status plant and wildlife species in the project vicinity as well as other projects in the region with similar levels of development and lack of biological resources. The project area and surrounding region within the lowland valleys of San Bernardino and Riverside counties were historically composed of native coastal sage scrub and alluvial fan sage scrub habitats, with native riparian vegetation communities associated with natural waterways scattered throughout the valley. Residential development, commercial development, and transportation improvements have resulted in large amounts of native habitat removal. The project area and surrounding region is currently composed of extensive commercial and residential development and associated public infrastructure, with most open lands consisting of agricultural and disturbed open space associated with private residences or public infrastructure. Construction of disturbed and developed open areas within the project site are generally limited to the northern portion of the project. Conversion of natural communities to development has resulted in severe habitat loss. In addition, the construction of roadways and other infrastructure has fragmented and isolated what native areas remain.

Three natural communities occur within the Biological Study Area (BSA) for the project: Chamise Chaparral, California Sagebrush-California Buckwheat Scrub, and Riparian/Riverine habitats (i.e., Arroyo Willow Thicket, Mulefat Thicket, and Cattail Marsh). Ten special-status plant species and 20 special-status wildlife species have the potential to occur within the BSA, two of which were observed during field surveys (i.e., chaparral sand-verbena [*Abronia villosa* var. *aurita*] and loggerhead shrike [*Lanius ludovicianus*]). Construction of the project would result in the permanent or temporary removal of Chamise Chaparral and California Sagebrush-California Buckwheat Scrub habitat (**Table 2-101**) as well as temporary indirect impacts on surrounding native vegetation (e.g., degradation of habitat, dust, increased fire risk). The project is not expected to affect any special-status plant species directly; however, the project may have indirect and temporary impacts on special-status plant species through the alteration or loss of potential habitat should these species be present. The potential also exists for the alteration or loss of potentially suitable habitat for special-status wildlife species as well as direct mortality

and injury of individuals during vegetation and clearing and grading should these species be present. Temporarily removed habitat would be replaced in-kind. Indirect impacts on habitat and special-status species would be minimized and avoided, and the number of individual wildlife directly affected, should they be present, would be low with implementation of the measures described in the NES.

Table 2-101. Impacts on Natural Communities

Natural Community	Permanent Impact (acre)	Temporary Impact (acre)
California Sagebrush-California Buckwheat Scrub	0.31	8.30
California Sagebrush-California Buckwheat Scrub, Disturbed	3.09	11.24
Chamise Chaparral, Disturbed	0.00	0.34
Total	3.40	19.88

Operation of the Build Alternative is expected to increase indirect effects on natural communities and any special-status species that may be present, including degradation of habitat through the risk of fire, air pollution, litter, and noise. In addition, the potential exists for direct effects on special-status wildlife species from project operation, should they be present. The addition of vehicle lanes could increase the risk of vehicle strikes. Widening the interstate and increasing the area of active roadway could pose a greater risk to these species when attempting to cross the facility. However, conditions related to the operation and maintenance of the Build Alternative would not differ appreciably from existing operating conditions. The roadway would continue to produce noise, dust, air pollution, and fire risk.

Construction of the project would directly remove Chamise Chaparral and California Sagebrush-California Buckwheat Scrub habitats, and, potentially, cause impacts through indirect effects. The project would also incrementally increase the risk of mortality to individual wildlife crossing the widened interstate, should they be present. Over the past few decades, residential development, commercial development, and transportation improvements have resulted in large amounts of native habitat removal, including Chamise Chaparral and California Sagebrush-California Buckwheat Scrub habitats. Removal of natural communities of concern and potential habitat for special-status species is expected to continue as future projects in the region are constructed (**Table 2-100**). The project may incrementally increase pollution, noise, and traffic in the area. However, the project would treat surface runoff, thereby reducing pollution. In addition, the project is widening an existing interstate, not adding a new facility in a previously undisturbed area and causing increased fragmentation. Because the project-related degree of contribution to this impact would be limited, primarily affecting degraded habitat and only a small number of individual wildlife species (if at all), the project would not make a cumulatively considerable contribution to the long-term regional decline of these natural communities or special-status plants or wildlife.

Threatened and Endangered Species

Native vegetation communities and waterways that once occurred throughout the BSA and surrounding region historically provided habitat for a wide range of plant and wildlife species that are now listed as threatened or endangered, including Santa Ana River woollystar

(*Eriastrum densifolium* ssp. *sanctorum*), slender-horned spineflower (*Dodecahema leptoceras*), vernal pool fairy shrimp (*Branchinecta lynchi*), Santa Ana sucker (*Catostomus santaanae*), arroyo toad (*Anaxyrus californicus*), coastal California gnatcatcher (*Polioptila californica californica*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and Stephens' kangaroo rat (*Dipodomys stephensi*). Due to threats from habitat loss, human development and disturbances, and invasive species, these species occur in limited areas and numbers within the BSA and surrounding region.

The following species observed or potentially occurring in the BSA for the project is protected under the federal Endangered Species Act:

San Bernardino kangaroo rat (*Dipodomys merriami parvus*)—Federal endangered; not observed in the BSA, but potentially suitable habitat and critical habitat with Primary Constituent Elements could experience indirect impacts. Critical habitat without Primary Constituent Elements could also experience direct temporary impacts.

Project impacts on the San Bernardino kangaroo rat potentially occurring within the BSA may include indirect effects resulting in degradation of habitat, as well as temporary removal of U.S. Fish and Wildlife Service–designated San Bernardino kangaroo rat unoccupied critical habitat without Primary Constituent Elements.

It is expected that the I-15 CP will result in no permanent impacts on San Bernardino kangaroo rat or critical habitat with Primary Constituency Elements.

2.4.3.8 Waters

Historically, the BSA and surrounding region contained numerous natural rivers, creeks, and ephemeral drainages that were a part of the Santa Ana River watershed, which covers 2,800 square miles and drains through San Bernardino, Riverside, and Orange counties before emptying into the Pacific Ocean. In addition, wetlands, including vernal pools, marshes, and seeps, were scattered throughout the valley. Following human development of the valley, the majority of wetlands throughout the region have been filled, and most natural drainages have been modified for flood-control purposes, which has included converting the drainages to concrete channels; rip-rapping banks; channelizing; and building culverts, storm drains, and detention basins. In addition, the construction of roadways and other infrastructure has resulted in changes to natural drainage courses. Currently, the BSA bisects several creeks, including Day Creek and Etiwanda Creek, and several constructed flood-control channels. Within the BSA, both Day Creek and Etiwanda Creek have been converted from natural-flowing creeks into concrete channels. One aquatic feature within the BSA met the U.S. Army Corps of Engineers (USACE) definition of a wetland. This feature consists of standing water within a concrete-lined flood-control channel with sediment build up that supports Arroyo Willow Thicket habitat.

The RSA for waters includes the project limits of disturbance and a one-mile buffer. This area considers the minimal, incremental effects of the Build Alternative on aquatic resources in the project vicinity as well as other projects in the region with similar levels of development.

The project would result in permanent and temporary impacts on waters under the jurisdiction of USACE, RWQCB, and California Department of Fish and Wildlife (CDFW); no temporary or permanent impacts on wetlands would occur (**Table 2-102**).

Table 2-102. Impacts on Potential USACE, RWQCB, and CDFW Jurisdiction

Wetlands and Other Waters of the U.S. and State (Jurisdiction)	Permanent Impact (acre)	Temporary Impact (acre)
Non-Wetland WoUS/WoS (USACE/RWQCB)	--	0.18
Wetland WoUS/WoS (USACE/RWQCB)	--	--
Non-Wetland WoS (RWQCB Only)	0.63	1.10
Unvegetated Streambed (CDFW)	0.01	1.77
Non-Riparian Vegetated Bank (CDFW)	--	0.01

The project would require permits from the following agencies:

- USACE: Pursuant to Section 404 of the federal Clean Water Act
- CDFW: Pursuant to Section 1602 of the California Fish and Game Code
- RWQCB: Pursuant to Section 401 of the federal Clean Water Act

The project would result in permanent or temporary impacts on jurisdictional and other waters (**Table 2-102**); no direct impacts on wetlands would occur. Other cumulative projects occurring within the same region that contain aquatic resources may also result in permanent or temporary impacts on wetlands and other WoUS. It is expected that the I-15 CP will not result in a cumulatively considerable contribution to impacts to waters within the RSA.

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Chapter 3. California Environmental Quality Act (CEQA) Evaluation

3.1 Determining Significance Under CEQA

The proposed project is a joint project by the California Department of Transportation (Department) 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 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. The Department 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 the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an 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 project and CEQA significance.

3.1.1 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.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 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.

I. 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 checked="" type="checkbox"/>	<input 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"/>

a) Less than Significant

As discussed in the Visual/Aesthetics Section 2.1.10 of Chapter 2, some local roadways that include long-range vistas of scenic resources, such as the foothills and nearby mountains, are designated as view corridors, special boulevards, or as Theme Corridors. In addition, a section of SR-210, including the portion that crosses the I-15 within the project area, is designated as a view corridor.

The proposed project improvements would be constructed at the same grade and would not obstruct or alter the views from the scenic vistas in the project area. The Build Alternative would not change the existing visual patterns and would not have a substantial effect on scenic vistas. Therefore, the project would have less than significant impact to the scenic vistas. No mitigation measures are required.

b) No Impact

The freeway segment within the I-15 CP is not a designated State Scenic Highway, or identified as eligible to be designated, and is not part of local jurisdictions designated scenic routes.

c) Less than Significant

As discussed in the Visual/Aesthetics Section 2.1.10 in Chapter 2, all of the proposed widening would occur within the existing state right of way, and would mostly occur by adding to the existing paved median. The project would add new structural elements such as retaining walls, as well as expand some existing bridge structures. However, the project would not construct any new large structures and would not substantially alter the existing visual character, create a substantially new dominant view, or obstruct existing views. The project would result in the removal of existing landscape trees and vegetation. All removed landscape would be replaced within the same location when possible.

The proposed project would apply content sensitive design solutions to landscaping and aesthetic treatment to structures such as retaining walls and bridge abutments. It is anticipated that the project would not degrade the visual quality of the site and its surrounding area; therefore, it would result in less than significant impact. No mitigation measures are required.

d) Less than Significant

The project would not add new street lighting to the I-15 roadway. New soffit lighting would be provided under the new bridge decking where needed to improve visibility and safety conditions. All lights would be directed towards the streets to minimize effect on nearby areas. Nighttime construction lighting would also be shield to minimize ambient spillover to surrounding areas. New signage and sign poles would be installed as part of the project. Metal signs and posts would be compatible with the existing conditions, and would not have substantial increase in light and glare.

The project would not create substantial light and glare that would adversely affect day or night views in the area; therefore, it is anticipated that the project would have less than significant impact due to light and glare. No mitigation measures are required.

II. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>

a) No Impact

While there are unique and prime farmlands located within or close to the I-15 corridor, the proposed project is planned and expected to be constructed entirely within the I-15 right of way. No conversion of prime farmland, unique or farmland of local importance would result under the Build Alternative. No farmland would be permanently incorporated into the project, and no impacts on farmlands or forestland or timberlands would result from implementation of the project. Therefore, the project would have no prime farmland, unique or farmland of local importance. No mitigation measures are required.

b) No Impact

The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. There are no parcels under a Williamson Act contract within the project limits.

c), d) No Impact

There are no forest or timberlands within the project limits.

e) No Impact

There are no other changes anticipated to farmland or forest land.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) No Impact

The project lies within the San Bernardino County and Riverside County portions of the South Coast Air Basin, which are under the jurisdiction of the SCAQMD. SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment. SCAQMD's most recent plan to achieve air quality standards is the 2016 AQMP.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The 2016 AQMP outlines comprehensive control strategies to meet PM_{2.5}, O₃, and Pb standards and to maintain CO, NO₂, and PM₁₀ standards. These strategies are based, in part, on the regional population, housing, and employment projections (and related transportation-source emissions) prepared by the region's cities and counties and adopted by SCAG. Projects that propose development that is consistent with the growth anticipated in the relevant land use plans used in the formulation of the AQMP are therefore considered to be consistent with the AQMP. The governing land use documents relevant to the project area are the SCAG 2016–2040 RTP/SCS Amendment 1 and the SCAG 2019 FTIP Amendment 1.

The project is properly identified in the SCAG 2016–2040 RTP/SCS Amendment 1 and the SCAG 2019 FTIP Amendment 1 under project numbers 4122206 and 20159901, respectively. Pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. Accordingly, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

b) Less-Than-Significant Impact

The impact analyses provided in Section 2.2.6 demonstrate that the project emissions during short-term construction and long-term operations would not violate any air quality standard or contribute substantially to any existing or projected air quality violation. Summaries of project construction- and operations-period emissions are provided in Section 2.2.6.

c) Less-Than-Significant Impact

Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The Basin is the study area for cumulative effects on air quality. The Basin experiences chronic exceedances of state and federal ambient air quality standards as a consequence of past and present projects, and it is subject to continued nonattainment status by reasonably foreseeable future projects. These nonattainment conditions within the region are considered cumulatively significant. The SCAQMD has prepared and periodically updates the Basin's regional AQMP that sets forth a comprehensive and integrated program that would lead the Basin into compliance with the federal and state air quality standards.

A project would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants, if it is included within the AQMP emissions inventory.¹ For transportation projects, this means being included in the currently conforming SCAG 2016–2040 RTP/SCS Amendment 1. This is because RTP/SCS emissions are accounted for within the AQMP. As discussed above, the project is included in the currently conforming SCAG 2016–2040 RTP/SCS Amendment 1 under project number 4122006.

Furthermore, as discussed above in Section 3.2, Construction Period Effects, the proposed project would comply with SCAQMD Rule 403 (Fugitive Dust Control) during construction—as well as all other adopted AQMP emissions control measures—to minimize impacts on nearby sensitive receptors. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements would also be imposed on all projects Basin-wide, which would include all nearby projects.

For the reasons identified above, project implementation would not result in a cumulatively considerable increase in any air pollutant emissions.

¹ State CEQA Guidelines Section 15064(h)(3) states “A lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project’s incremental contribution to the cumulative effect is not cumulatively considerable. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding that the project complies with the specified plan or mitigation program addressing the cumulative problem, an EIR must be prepared for the project.”

d) Less-Than-Significant Impact

SCAQMD defines sensitive receptor locations as residential, commercial, and industrial land use areas, as well as other locations where sensitive populations may be located. Other sensitive receptor locations include schools, hospitals, convalescent homes, daycare centers, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed (SCAQMD 2005). Sensitive receptors within the project vicinity include nearby residential uses. While project construction would require approximately three years, because of the linear nature of the project footprint (i.e., 14.7 miles), individual receptor locations would be exposed to relatively short durations of nearby construction emissions. In other words, individual receptor locations may be exposed to nearby emissions for a cumulative total of approximately six months to one year, but this would be spread out over three years. As such, the diesel particulate matter from construction equipment would be sporadic, transitory, and short-term in nature. The project would not expose receptors to acute and/or chronically hazardous toxic air contaminant pollutants.

e) Less-Than-Significant Impact

According to ARB and SCAQMD, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993, ARB 2005).

The proposed project does not include any uses identified by the ARB or SCAQMD as being associated with odors, and therefore, would not produce objectionable odors. Odors resulting from construction of the proposed project are not likely to affect a substantial number of people because construction activities usually do not emit offensive odors. Potential odor emitters during construction activities include asphalt paving. SCAQMD Rule 1108 limits the amount of volatile organic compound emissions from cutback asphalt. Given mandatory compliance with SCAQMD rules, no construction activities or materials are proposed that would create a meaningful level of objectionable odors.

IV. 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 type="checkbox"/>	<input checked="" 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"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

a) Less Than Significant Impact

As detailed in the Threatened and Endangered Species section in Chapter 2, no direct impacts are anticipated on the federally listed endangered and state-listed species of special concern San Bernardino kangaroo rat, including any individuals, potentially suitable habitat that could support this species, or critical habitat with PCEs. Because project impacts would be limited to utility trenching and temporary construction areas along the highway shoulder, and no impacts would occur to potentially suitable habitat or critical habitat with PCEs, the impacts to the San Bernardino kangaroo rat are less than significant with the implementation of avoidance and minimization measures described in Chapter 2.

b) Less Than Significant with Mitigation Incorporated

As detailed in the Natural Communities section in Chapter 2, this project would permanently impact 3.40 acres of natural communities identified by CDFW, including California Sagebrush- Buckwheat Scrub and Chamise Chaparral. No direct impacts would occur on riparian habitats. Because the project has relatively minor permanent impacts on California Sagebrush-California Buckwheat Scrub and Chamise Chaparral, which are limited mainly to disturbed areas within the existing state right of way, the impacts to natural communities are less than significant with the implementation of avoidance and minimization measures described in Chapter 2.

As detailed in the Wetlands and Other Waters section in Chapter 2, this project would result in permanent and temporary impacts on non-wetland WoS and CDFW unvegetated streambed and non-riparian vegetated bank (see Table 2-91 in section 2.3.2 for impact acreages). Permanent and temporary impacts on non-wetland WoS and CDFW unvegetated streambed and non-riparian vegetated bank would be mitigated at a minimum of 3:1 and 1:1 ratio,

respectively, at an approved mitigation bank or applicant-sponsored mitigation area and would be less than significant with mitigation incorporated.

c) Less Than Significant with Mitigation Incorporated

As detailed in the Wetlands and Other Waters section in Chapter 2, this project would not have any temporary or permanent direct effects on USACE/RWQCB wetland WoUS or WoS. It would, however, result in 0.18 acre temporary impacts on non-wetland WoUS and these temporary impacts would be mitigated at a minimum 1:1 ratio, at an approved mitigation bank or onsite mitigation if possible and would be less than significant with mitigation incorporated. Currently, the USACE is reviewing the jurisdictional documentation for the WoUS and the findings will be incorporated into the final environmental document with the appropriate impacts and measures, prior to approval of the final environmental document.

d) No Impact

This project would not affect any migratory wildlife corridors or the movement of any native resident or migratory fish or wildlife species. This project will not impede the use of native wildlife nursery sites.

e) No Impact

This project would not conflict with any local policies or ordinances protecting biological resources.

f) No Impact

This project would not conflict with the provisions of the MSHCP or any other approved local, regional, or state habitat conservation plan.

V. 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) No Impact

- No tribal resources, archaeological resources or paleontological resources were identified in the APE. The built resources located in the APE are
- A portion of historic Route 66 (P-36-002910), currently Foothill Boulevard
- The Summit Avenue Ditch (P-36-006901)
- The Old Spanish National Trail

None of the portions of these three built resources located in the APE were found eligible under the criteria for listing on the California Register of Historical Resources (CRHR) or the National Register of Historic Properties (NRHP). Therefore, no impacts to cultural resources would occur as a result of the project.

b), d) Less Than Significant Impact

In the event that cultural materials or human remains are discovered during construction, the following measures will be adopted to avoid and/or minimize the effect:

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code 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. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Jones, District Native American Coordinator, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

c) Less Than Significant with Mitigation Incorporated

Excavations for the project would potentially disturb two fossiliferous Pleistocene formations, Young eolian deposits of Holocene and late Pleistocene age, and Young alluvial-fan deposits, of early Holocene and late Pleistocene age. However, much of the project footprint has already been disturbed by past excavations and construction. Ground-disturbing activities for the Build Alternative may impact native material up to approximately 10 feet bgs within the project limits, and earthwork to these depths would affect sensitive geological deposits, if they are undisturbed, however, no paleontological resources have been recorded in the project area. Ground disturbances associated with the project would primarily be shallow in nature, and unlikely to encounter paleontological resources at depths of less than five feet. Disturbance activity may also have already disturbed sediment below five feet in depth. However, deeper excavation, such as that for utility relocations or bridge piles and support piers, could encounter fossil resources at depths greater than 5 to 10 feet. Given the depths of previous disturbance and the small footprint of these excavations, there is a low likelihood of encountering paleontological resources during construction activities. However, a Paleontological Mitigation Plan (PMP) that follows Caltrans guidelines and the

recommendations of the Society of Vertebrate Paleontology (SVP) will be prepared. The following mitigation measures will be implemented, as necessary:

- P-1**
- a. A project-specific PMP will be prepared by a qualified principal paleontologist (MS or PhD in paleontology) once adequate project design information regarding subsurface disturbance location, depth, and lateral extent is available.
 - b. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas may be halted or diverted by the Resident Engineer to allow the prompt recovery of fossils.
 - c. Fossils collected during the monitoring and salvage portion of the mitigation program will be prepared to the point of identification, sorted, and cataloged.
 - d. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program.
 - e. The qualified principal paleontologist will be present at pre-construction meetings to confer with contractors who will be performing ground-disturbing activities.
 - f. Paleontological monitors, under the direction of the qualified principal paleontologist, will be on site to inspect cuts for fossils at all times during original ground disturbance involving sensitive geologic formations.
 - g. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited in a scientific institution with paleontological collections.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code 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. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Jones, District Native American Coordinator, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

VI. 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

a.i) No Impact

As mapped on the May 1, 2003, Corona North Quadrangle, Special Studies Zones, Official Map, and the June 1, 1995, Devore Quadrangle Revised Official Map, known active fault traces do not cross the I-15 alignment at the project location.

a.ii,iii,iv) Less than Significant

As discussed in Section 2.2.3 of Chapter 2, the project is subject to strong ground shaking as a result of active earthquake faults located near the project area. Higher-magnitude ground accelerations are expected at the northern end of this alignment, closest to the active San Jacinto and San Andreas faults. Liquefaction and lateral spreading potential is considered very low along the project area. The topography adjacent to the project location is relatively flat.

As a result, landslide considerations are limited to the roadway and bridge embankments. Landslides are also a consideration during construction in cut and fill areas. Geotechnical investigation during the design-build phase of the project would determine design requirements for bridges, embankments, retaining walls, and other structural elements of the project. All temporary excavation during construction would be conducted according to the standard plans and specifications and latest safety rules and regulations. It is anticipated that the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving; therefore, the project impacts are less than significant. No mitigation measures are required.

b) Less than Significant

Excavation activities during construction, including in areas of cut and fill, may increase the potential for soil erosion within the project area. According to the Water Quality and Storm Water section of Chapter 2 in this document, temporary effects of construction activities on soil erosion would be addressed through the implementation of erosion control BMPs. No substantial adverse impacts related to soil erosion or loss of topsoil are expected as a result of the project. It is anticipated that the project would have less than significant impact on erosion or loss of topsoil. No mitigation measures are required.

c, d) Less than Significant

The project is not located on a geological unit or soil that is unstable or expansive. As mentioned in the response to question a, liquefaction and lateral spreading potential is considered very low along the project area. Any fill soils would be reviewed and approved by the Geotechnical Engineer of Record in accordance with Caltrans standards. Any finish cut slopes in alluvium and/or existing fill soils would be graded no-steeper-than 2:1 (horizontal: vertical), or supported with retaining walls. Geotechnical investigation during the design-build phase of the project would support the design and implementation of the project according to the latest Caltrans standards and specification. It is not anticipated that the project would result in a risk to life and property due to these factors; therefore, the project has less than significant impact. No mitigation measures are required.

e) No Impact

The project does not include the construction of septic tanks or alternative systems, nor does it require any wastewater disposal.

VII. GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

See Chapter 3.2 Climate Change for discussion of greenhouse gas (GHG) emissions and climate change.

VIII. 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Less than Significant

The proposed project would not routinely use, generate, or transport hazardous material or waste. The project would dispose of small amounts of arsenic material resulting from clean-up in the vicinity of rail road facilities prior to beginning of construction. With the implementation of standard avoidance measures listed in Section 2.2.5.3 of this document, it is anticipated that there would be minimal impacts to the public due to disposal of hazardous material; therefore, the project has less than significant impact. No mitigation measures are required.

b) Less than Significant

Potential sources of hazardous waste/materials that may be encountered during construction include ACM and LBP that may be contained within the structures and highway paint any potentially undiscovered sources of contamination. The standard measures described in Section 2.2.5.3 would be implemented to avoid and minimize the potential for hazard to workers and the public. The project would have less than significant impact to the public or the environment as a result of conditions involving the release of hazardous materials into the environment.

c) No Impact

There are several schools located within the project area overall; however, there are no schools that are located within one-quarter mile from the project area. Construction activities including storage and staging areas are anticipated to be within the I-15 right of way limits. It is not anticipated that the project would have impact on schools due to hazardous material.

d) No Impact

The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e, f) No Impact

The project is not located within an airport land use, and is approximately two miles from the Ontario International Airport, in the City of Ontario. The project would not result in a safety hazard for people residing or working in the project area.

g) Less than Significant

The project would improve travel conditions on I-15 within the project area. The project would not physically interfere with emergency response or emergency evacuation plans. Full closures and detours during construction activities have the potential to affect emergency services and evacuation plans. However, the construction impacts are anticipated to be temporary and for short terms occurring during off peak night time and weekends. These impacts would be further reduced with the implementation of a TMP as described in Measures COM1-COM-5 in Section 2.1.5.4 of this document. These measures include continuous coordination with local jurisdictions and emergency services providers, as well as a robust public awareness campaign.

h) Less than Significant

The project is located in an urbanized area and does not include wildlands. The northern limit of the project area is near the San Bernardino National Forest; however, all project improvements would occur within the existing right of way limits with the Express Lanes located within the median area of the facility. It is not anticipated that the project would bring traffic any closer to forestland, and would not result in increasing the risk of fire to nearby residences or business. No mitigation measures are required.

IX. 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

a) Less than Significant

The discharge from the operation of the project have the potential to discharge pollutants to receiving waters identified in Water Quality and Storm Water Runoff Section 2.2.2. Typical roadway generated pollutants include sediment, organic compounds (i.e., petroleum hydrocarbons), trash, bacteria, oil and grease, and metals. Standard treatment BMPs are developed for the project according to Caltrans Statewide Storm Water Management Plan (SWMP). The total area treated by the existing and proposed treatment BMPs is approximately 74.6 acres, or 100 percent of the required post-construction treatment area. The treatment BMPs are measures designed to remove pollutants from storm water runoff prior to discharging to receiving waters. It is anticipated that the project would have less than significant impact on water quality and waste discharge requirements.

b) Less than Significant

Natural groundwater recharge is reduced when the ground is compacted or when it is covered with impervious material such as asphalt and concrete, reducing the natural infiltration potential within the project area. As discussed in Section 2.2.2, there are two recharge facilities within the project area; Victoria Basin, and Wineville Basin. The project would increase impervious area; however, the project area does not discharge to Victoria Basin and would not impact groundwater. The runoff from the project is conveyed into Caltrans storm drain systems, then further into the City's storm drain network, and then discharging into the Wineville Basin. In addition, the project does not require the use of any groundwater. The project would have less than significant impact on recharge or depleting of groundwater resources.

c) No Impact

The project would not require the modification of drainage facilities or the course of a stream and river.

d) Less than Significant

According to the analysis in Section 2.2.2, the existing drainage facilities are adequate to convey the 25-year design storm resulting from the proposed project. The project runoff discharge would not result in the modification or otherwise altering the existing storm drain connections to the Flood Control Facilities. The project would not substantially alter the existing drainage pattern on or off site, and would not increase the rate or amount of runoff in a manner that would result in flooding; therefore, the project has less than significant impact. No mitigation measures are required.

e, f) Less than Significant

See answer to question (IX-d) above for information of impacts on drainage system capacity. The project has the potential to provide additional sources of polluted runoff. See answer to question (IX-a) above for answer regarding permanent impacts on water quality. Pollutants that may result from construction activities include sediments, trash, petroleum products, and other construction related waste. Construction activities of the project would result in an estimated 160 acres of total Disturbed Soil Area (DSA), which would result in potential for increased soil erosion and transport by runoff into receiving waters. The project would be

required to develop a Storm Water Pollution Prevention Plan (SWPPP) to identify measures that would address these impacts. With the implementation of SWPPP and NPDES general permits and requirements, it is not anticipated that the project would result in impacts on water quality due to construction activities. The project would have less than significant impact on water quality.

g) No Impact

The project does not include construction of housing and would not result in placing housing within the 100-year flood hazard area.

h) No Impact

According to the Hydrology and Floodplain Section 2.2.1 of this document, all 100- year floodplains within the project limits are contained within the boundaries of the channels or basins. The project includes widening of bridges at two locations within the flood basins and channels identified in the project study area. One is along Etiwanda Channel and San Sevaine Channel, just north of Victoria Street. The second is along Day Creek Channel, just south of Arrow Route. The Etiwanda Creek Bridge is located along the Etiwanda and San Sevaine channels. The bridge is supported by abutments along the sloped embankment and the improvement would not result in the addition of piers or restriction of the channel. The Day Creek Bridge is also supported by piers outside the boundary of the channel. Improvements to the bridges would not result in the addition of piers or restriction of the channel and would not impact the hydraulics performance of the channels.

i) No Impact

The implementation of the proposed improvements is not expected to impact special flood hazard zones associated with the Day Creek Channel, Etiwanda Creek Channel or any other mapped flood plains, and would not result in risk to people or property as a result of failure of a levee or dam.

j) No Impact

The project is not located in an area prone to inundation by seiche, tsunami, or mudflow.

X. 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"/>

a) No Impact

The proposed project is anticipated to be constructed and operated in the existing right of way; therefore, acquisition of adjacent properties would not be required. Implementation of the proposed project would not cut off connected neighborhoods or land uses from each other. No development features are proposed that would divide an established community or limit movement, travel, or social interaction between established land uses. No changes to existing land uses or land use designations would result from the project. Air pollution and noise effects are currently experienced by land uses adjacent to I-15.

While widening I-15 would result in impacts, such as general construction disruptions, increased air pollution from the addition of traffic lanes, and increased noise from traffic that would be closer to land uses adjacent to the highway, these impacts are not anticipated to be of a severity such that existing land uses would become incompatible with the proposed improvements. There would be no impacts related to land use compatibility or planning.

b) No Impact

As discussed in the Land Use Section 2.1.1 of Chapter 2, and shown in Table 2-2, the Build Alternative would not conflict with any applicable federal, state, regional, or local programs, plans, or policies. No avoidance, minimization, and/or mitigation measures are required.

c) No Impact

The project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

XI. 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"/>

a, b) No Impact

There are no mineral resources available in the project area. Fill material for the project would be acquired from approved borrow sites. The project would not result in the loss of important local mineral resources recovery sites, or mineral resources of value for the region and the state; therefore, there the project has no impacts on mineral resource.

XII. 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input 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"/>

a) Less than Significant

Residential Locations

As discussed in the Noise Section 2.2.7 of Chapter 2, noise level at residential sites range from 50 dBA Leq to 71 dBA Leq under the existing conditions. Noise levels under Design-Year Build conditions would range from 54 dBA Leq to 75 dBA Leq. The changes during the Design-Year Build condition relative to the existing conditions would range from a -7 dB decrease to a 6 dB increase. A 3 dB increase is the generally accepted threshold at which a person of normal sensitivity can begin to identify a perceptible change in noise. A 5 dB increase is considered a noticeable change. Caltrans considers a substantial increase of 12 dB in noise levels, between future build and existing conditions, to be the CEQA threshold of significance.

Twenty-one modeled locations would experience a 4 dB increase under the Design-Year Build condition relative to the existing. Nine modeled locations would experience a 5 dB increase under the Design-Year Build condition relative to the existing. Three modeled locations would experience a 6 dB increase under the Design-Year Build condition relative to the existing.

With the feasible and reasonable noise barriers constructed (under NEPA, 23 CFR 772, requirements), the highest future Design-Year Build noise level increases relative to existing conditions at residential locations would be only 4 dB. Such increases would occur at eight modeled locations behind existing property line walls in Area G. Highest hourly future Design-Year Build noise levels at these eight locations would range between 54 dB to 61 dB, which are well below the NAC of 67 dB. Therefore, the project would not cause significant impacts at any residential locations along the project corridor.

Recreational Locations

For recreational sites existing noise levels along the project alignment would range from 59 dBA Leq to 72 dBA Leq. Noise levels under Design-Year Build conditions would range from 61 dBA Leq to 74 dBA Leq. The changes during the Design-Year Build condition relative to the existing conditions would range from no change to a 3 dB increase. Therefore, the project would not cause significant impacts at any recreational locations along the project corridor.

Outdoor Commercial Locations

For outdoor commercial sites existing noise levels along the project alignment would range from 57 dBA Leq to 74 dBA Leq. Noise levels under Design-Year Build conditions would range from 58 dBA Leq to 75 dBA Leq. The changes during the Design-Year Build condition relative to the existing conditions would range from a 1 dB decrease to a 3 dB increase. Therefore, the project would not cause significant impacts at any outdoor commercial locations along the project corridor.

b) Less than Significant

Any groundborne noise or vibration would be limited to the construction period and would be short in duration.

In general, literature on the subject shows that only blasting, pile driving, and pavement breaking have documented examples of potential damage to buildings (American Association of State Highway and Transportation Officials [AASHTO] 1990). For pile driving and pavement breaking, the potential for damage from vibration is at locations in relatively close proximity to the activity. The closest structure (located approximately 350 feet) would be at the Cherry Avenue undercrossing. Vibration Peak Particle Velocity (PPV) would reduce at a rate of $PPV_{ref} \times (25/D)^N \times (E_{equip}/E_{ref})^{0.5}$, where:

- $PPV_{ref} = 0.65$ inches/sec at a reference distance of 25 feet,
- D = distance from the pile driver,
- $N = 1.1$ is the value related to attenuation of vibration throughout the ground,
- $E_{ref} = 36,000$ foot-lb (rated energy of reference pile driver),
- E_{equip} = rated energy of impact pile driver in ft-lbs (assumed same as reference).

CIDH piles would be used in place of vibration intensive impact pile driving in bridge construction within the project limits starting at Foothill Boulevard and extending to the northern limit of the project with the exception of Victoria Street Undercrossing, and the Cherry Avenue Undercrossing due to unsuitable soil conditions. Vibration levels identified in the FTA Noise and Vibration manual identify that (caisson) drills, which are similar to auger drills, would produce 0.089 Peak Particle Velocity (PPV) at a distance of 25 feet, which would be below the level of damage for buildings which are considered extremely susceptible to vibration damage (0.12 PPV). As any land uses susceptible to vibration impacts would be more than 25 feet from construction equipment, vibration would not result in an impact. (FTA 2018)

For locations where pile driving may be necessary, (Victoria Street Undercrossing, and the Cherry Avenue Undercrossing), the closest habitable structure would be approximately 375 feet from the vibration sources. As such, vibration levels would be on the order of 0.03 PPV. (Caltrans 2013)

Vibration from construction would be well below the 0.12 PPV damage potential for extremely vibration susceptible buildings referenced in the FTA noise and vibration manual. Therefore, groundborne vibration and noise effects are considered less than significant.

The proposed project does not involve changes that would result in noticeable increases in groundborne vibration or groundborne noise levels from use or maintenance of the roadway when compared with the No Build Alternative. Once the project is complete, long-term increases in groundborne noise levels from use or maintenance of the roadway would be less than significant.

c) Less than Significant

As discussed in the Noise a), change in noise levels during the Design-Year Build condition relative to the existing conditions would range from a -7 dB decrease to a 6 dB increase at noise sensitive receptors. While some of these changes may be perceptible (any change greater than a 3 dB increase), none of these changes would be considered a substantial

permanent increase. Therefore, under CEQA, no significant noise impact would occur as a result of the project and no mitigation is required. However, under NEPA/23 CFR 772, because the noise levels at this receptor already approaches or exceeds the noise abatement criteria of 67dBA, noise abatement would need to be considered.

d) Less than Significant

Construction of the proposed project could potentially result in a temporary increase in ambient noise levels in the project vicinity. Noise associated with the use of construction equipment is estimated between 79 and 89 dBA Lmax at a distance of 50 feet from the active construction area for the grading phase. Each piece of construction equipment operates as an individual point source. The worst case composite noise level at the nearest residence during this phase of construction would be 91 dBA Lmax (at a distance of 50 feet from an active construction area). In addition to the standard construction equipment, the project may require the use of pile drivers; however, the use of pile drivers is not anticipated at this time. Pile driving generates noise levels of up to 96 dBA Lmax at 50 feet. In order to ensure that noise effects are minimized during the construction period, construction activities would be conducted in accordance with applicable local noise standards and Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2015 Standard Specifications and Special Provisions (NOI-1). Temporary ambient noise increases due to construction would be considered less than significant.

e) No Impact

The proposed project is located within 2 miles of the westernmost boundary of the Ontario Airport; however, no habitable structures are proposed as part of the proposed project. Therefore, no noise impacts related to air traffic would occur.

f) No Impact

The proposed project is not located within the vicinity of a private airstrip and no habitable structures are proposed as part of the proposed project. Therefore, no noise impacts related to air traffic would occur.

XIII. 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"/>

a, b, c) No Impact

The project would not induce population growth, would not displace people or any number of existing housing, and would not necessitate the construction of replacement housing anywhere.

XIV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) No Impact

The project would not result in the need to public services that would require altering or expanding any of the listed facilities; therefore, the project would have no impact on the environment as a result of construction of public facilities.

XV. RECREATION

Would the project:	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 type="checkbox"/>	<input checked="" type="checkbox"/>

a) No Impact

The proposed project would not directly increase the use of existing neighborhood parks or regional parks such that substantial physical deterioration of the facility would occur or be accelerated.

b) No Impact

The proposed project does not include or require construction or expansion of a recreational facility.

XVI. 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) 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"/>

a) No Impact

According to Land Use Section 2.1.1, the project was found to be consistent with all regional and local plans ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project does not include elements mass transit and non-motorized travel modes; however, the project does not affect any of these existing or future planned facilities. Chapter 4 documents coordination with transit facility providers in the project area.

b) No Impact

According to Traffic and Transportation Section 2.1.9, it is expected that the project would improve congestion within the I-15 freeway within the project area. The project would not conflict with congestion management programs and service standards established by Caltrans and the local agencies for roads or highways.

c) No Impact

The project would not have any impact on air traffic patterns or air travel patterns and locations.

d) No Impact

The project would be constructed to the most up-to-date design standard and approved design exceptions. The project would not result in hazard due to design features or incompatible uses.

e) Less than Significant

The project would result in less than significant impacts to emergency services. See answer to question VIII-g for the explanation of less than significant impact on emergency access.

f) No Impact

The project would not conflict with adopted policies, plans or programs for public transit, bicycle, or pedestrian facilities, and would not decrease the performance of these plans. The project would replace with the same any affected pedestrian facilities resulting from the project improvements. Therefore, the project would not decrease the performance or safety of such facilities.

XVII. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<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"/>

a, b) No Impact

No specific tribal resources were identified within the APE through the tribal consultation effort for the proposed project resulting in no impact.

XVIII. 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) No Impact

The proposed project would not result in any changes that would affect the wastewater treatment requirements.

b) No Impact

The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

c) No Impact

The project would not result in the construction or expansion of existing storm water drainage facilities. The project may extend or replace any culverts affected by the project improvements.

d) No Impact

Project construction would utilize available water supplies. No new resources and entitlements would be expanded or new entitlements are needed to serve the project.

e) No Impact

The project would not create additional need wastewater or sewer services.

f) Less than Significant

The project has the potential of generating concrete debris. The project would conform to all local, state and federal requirements on the disposal and recycling of excess construction materials. It is anticipated that the disposal of this project's generated debris has no potential to exceed the capacity of area landfills.

g) No Impact

According to Hazardous Waste and Material Section 2.2.5, all disposal of solid waste including any potential hazardous material would comply with federal, state, and local statutes and regulations. The project will have no impact on solid waste.

XIX. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Less Than Significant with Mitigation Incorporated

As described in Sections IV, Biological Resources and Section, the project would have less than significant impacts on riparian habitats with the implementation of avoidance and minimization measures described in Chapter 2. Impacts on WoUS and WoS would be less than significant with the implementation of the approved mitigation incorporated in the project. With the implementation of the identified measures, the project would not result in the degradation of the natural environment. The project would not eliminate important examples of the major periods of California history or prehistory, and would not cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5.

b) Less than Significant

The project does not have an adverse impact on the environment when reviewed in connection with the effects of past projects, current projects, and probable future projects.

c) Less than Significant

With the implementation of standard design specifications and BMPs, and other measures identified measures in Chapter 2, it is anticipated that the proposed project improvements would have less than significant impact on the environmental in a manner that would cause substantial adverse effects on human beings, either directly or indirectly.

3.2 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to 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 (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.² In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.³ The dominant GHG emitted is CO₂, 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).

3.2.1 Regulatory Setting

This section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

3.2.1.1 Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset

² <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

³ <https://www.arb.ca.gov/cc/inventory/data/data.htm>

management, project development and design, and operations and maintenance practices⁴. This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”⁵ Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

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

⁴ <https://www.fhwa.dot.gov/environment/sustainability/resilience>

⁵ <https://www.sustainablehighways.dot.gov/overview.aspx>

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 2010⁶ and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, 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.⁷

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 two billion barrels of oil and reduce CO₂ 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.

3.2.1.2 State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

⁶ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

⁷ <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>

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 SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals 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 strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order B-16-12 (March 2012) 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 (MMTCO₂e). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, (SB 32) Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

3.2.2 Environmental Setting

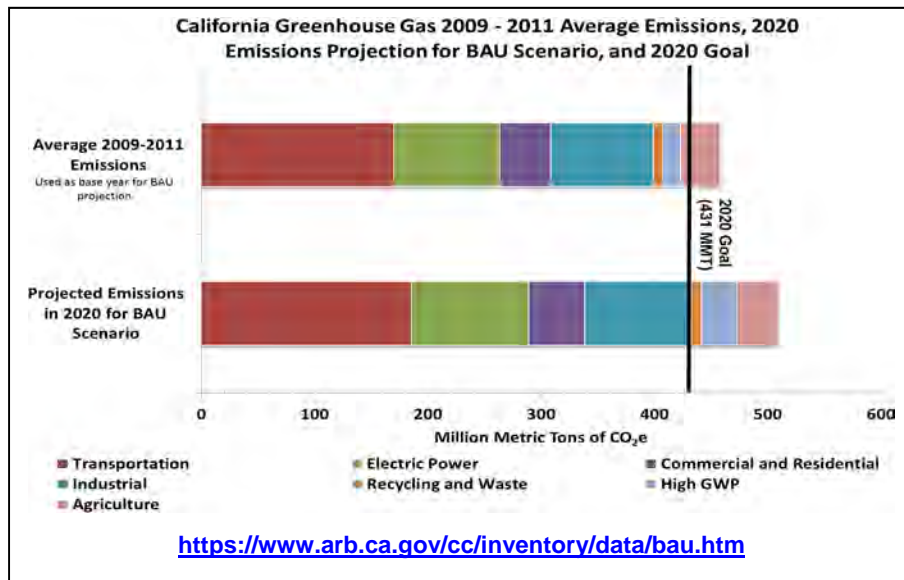
In 2006, the California Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the 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 SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California⁸. ARB is responsible for maintaining and updating California's GHG Inventory per Health and Safety Code Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

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 3-1** represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO₂e⁹. The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 MMTCO₂e, showing progress towards meeting the AB 32 goals.

⁸ 2017 Edition of the GHG Emission Inventory Released (June 2017): <https://www.arb.ca.gov/cc/inventory/data/data.htm>

⁹ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4).

Figure 3-1. 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

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 MMTCO₂e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO₂e.

3.2.3 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. 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 project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

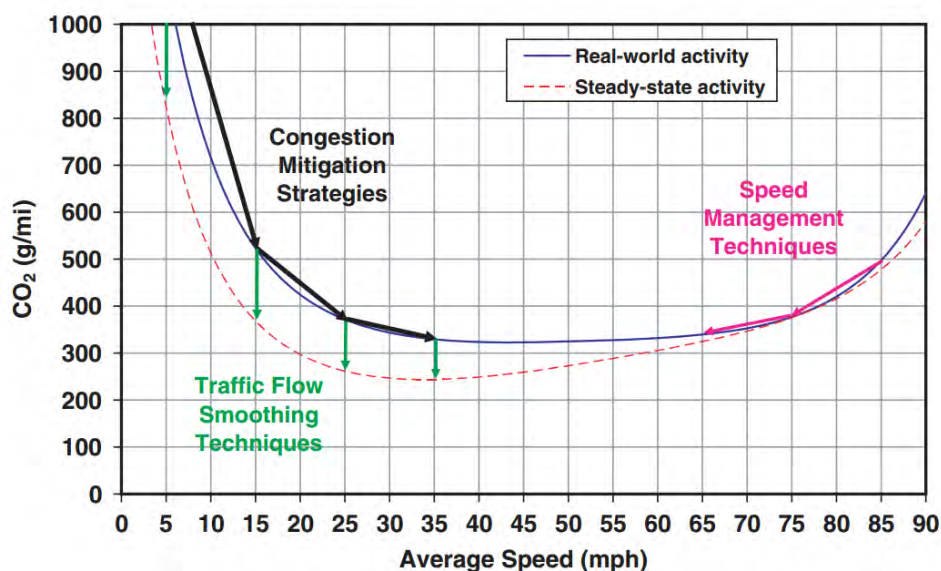
3.2.3.1 Operational Emissions

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity), (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.

FHWA supports these strategies to lessen climate change impacts and correlate with efforts that the state of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO₂ 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 3-2**). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO₂, may be reduced.

Figure 3-2. Possible Use of Traffic Operation Strategies in Reducing On-Road CO₂ Emissions



Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 2010. (<http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf>)

The proposed project is identified in the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) under project number 4122006. The SCAG 2016–2040 RTP/SCS includes several major initiatives that the proposed project would either directly implement or would support. The proposed project would directly implement the RTP/SCS initiative to improve highway and arterial capacity by adding capacity in the form of the Express Lanes, which are specifically identified as part of the initiative (SCAG 2016:6). The proposed project would also support the initiatives to manage demand on the transportation system through the encouragement of modes other than drive-alone trips as a result of the anticipated use of the reduced tolls for qualifying HOVs (SCAG 2016:6). The proposed project

would also support the RTP/SCS initiative to optimize the performance of the transportation system through the use of dynamic corridor congestion management, whereby tolls would fluctuate based on available capacity at a given time (SCAG 2016:7). In addition, the proposed project is consistent with the SCAG Congestion Management Process (CMP), which is “part of SCAG’s integrated approach to improving and optimizing the transportation system, to provide for the safe and effective management of the regional transportation system through the use of monitoring and maintenance, demand reduction, land use, operational management strategies and strategic capacity enhancements” (SCAG 2016:86). Each of the major initiatives of the RTP/SCS identified above and the CMP contribute to the overall GHG reduction efforts from mobile sources within the SCAG region. As discussed in the 2016-2040 RTP/SCS, the target reduction for GHGs at 2035 with RTP/SCS implementation is 18 percent per capita relative to a 2005 baseline.

The proposed project is also supportive of the HOV and mass transit goals and policies identified in the 2016-2040 RTP/SCS. As specified in Chapter 1, it is anticipated that HOVs with three or more occupants (HOV 3+), including vanpools, will be allowed to use the Express Lanes for a discounted rate. Although the proposed project does not involve the implementation of any public transit services, project implementation would not preclude a bus service from using the Express Lanes if such a service were to be established.

The project planning and environmental analysis for the proposed project has included an evaluation of existing and the potential for future multimodal transportation services, including such services as a potential component of the project. OmniTrans, Victor Valley Transit Authority, and Riverside Transit Agency were each consulted related to the proposed project and each agency confirmed that there are no short-term or long-term current plans to implement transit projects within the project corridor. Consequently, multimodal and alternative transportation discussions were not carried forward.

During the course of project planning, reversible lanes were evaluated as a potential alternative consistent with statutory requirements, but as discussed in Chapter 1, reversible lanes were determined infeasible from a roadway geometry and traffic demand and analysis perspective.

3.2.3.2 Quantitative Analysis

The project proposes to add additional lanes in each direction along approximately 14.7 miles of I-15 (from Post Mile 0.0 to Post Mile 12.2 in San Bernardino County; and from PM 49.8 to PM 52.3 in Riverside County). The proposed Build Alternative would improve traffic conditions along the I-15 project limits during peak travel periods. The VMT data shown in **Table 3-1**, along with EMFAC2014 emission rates (within the CT EMFAC model), were used to calculate the CO₂ equivalent (CO_{2e})¹⁰ emissions under the Baseline/Existing Year 2014, Opening Year 2024, and Horizon Year 2045 conditions. The forecast of CO_{2e} emissions is also shown in **Table 3-1**. For purposes of this analysis, CO_{2e} comprises CO₂ and methane (CH₄).

¹⁰ Carbon dioxide equivalent is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential. For example, the global warming potential for methane over 100 years is 21.

Table 3-1. Daily VMT and CO₂e Emissions Comparisons, Existing and Future

Alternative	CO ₂ Emissions (Metric Tons/Day)	Daily Vehicle Miles Traveled
Existing/Baseline 2014	1,104	2,589,655
Open to Traffic 2024		
No Build	987	3,058,041
Build Alternative 1	1,124	3,359,362
20-Year Horizon/Design-Year 2045		
No Build	974	3,712,000
Build Alternative 1	1,172	4,534,641
CT-EMFAC2014 modeling outputs and emissions calculations are provided in Appendix D to the <i>I-15 CP Air Quality Report</i> , December 2017. VMT = vehicle miles traveled CO ₂ e = carbon dioxide equivalent (Mobile-source GHG emissions include CO ₂ , CH ₄ , and N ₂ O; however, CT-EMFAC does not provide N ₂ O emissions factors. As such, the CO ₂ e emissions calculations for this project include CO ₂ and CH ₄ only.) Source: <i>I-15 CP Air Quality Report</i> , December 2017.		

As shown in **Table 3-1**, the modeled CO₂e emissions under the Build Alternative in both Opening Year 2024 and Horizon Year 2045 are higher than those for the Baseline Year (2014), while emissions would fall under the No Build Alternative in both years compared to baseline due to improvements in vehicle fuel efficiency.

At both Opening Year 2024 and Horizon Year 2045, modeled CO₂e emissions under the Build Alternative would be higher than those under the No Build Alternative by 14 percent and 20 percent, respectively. This is attributable to the fact that project improvements would result in increases in daily VMT and travel speeds along the I-15 project limits under the Build Alternative compared with the No Build Alternative. As shown previously in **Figure 3-2**, GHG emissions increase as travel speed increases to approximately 45 mph and beyond.

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 CO₂ emissions and not necessarily the actual CO₂ emissions. The model does not account for factors such as the rate of acceleration and the vehicles' aerodynamics, which would influence CO₂ emissions. To account for CO₂ emissions, ARB's GHG Inventory follows the IPCC guideline by assuming complete fuel combustion, while still using EMFAC data to calculate CH₄ and N₂O emissions. Though EMFAC is currently the best available tool for use in calculating GHG emissions, it is important to note that the CO₂ numbers provided are only useful for a comparison of alternatives.

Limitations and Uncertainties with Modeling

EMFAC

Although EMFAC can calculate CO₂ emissions from mobile sources, the model does have limitations when it comes to accurately reflecting changes in CO₂ emissions due to impacts on traffic. According to the National Cooperative Highway Research Program report, *Development of a Comprehensive Modal Emission Model* (April 2008) and a 2009 University of California

study,¹¹ brief but rapid accelerations, such as those occurring during congestion, can contribute significantly to a vehicle's CO₂ emissions during a typical urban trip. Current emission-factor models do not distinguish the emission of such modal events (i.e., acceleration, deceleration) in the operation of a vehicle and instead estimate emissions by average trip speed. It is difficult to model this because the frequency and rate of acceleration or deceleration that drivers chose to operate their vehicles depend on each individual's human behavior, their reaction to other vehicles' movements around them, and their acceptable safety margins. Currently, the EPA and the CARB have not approved a modal emissions model that is capable of conducting such detailed modeling. This limitation is a factor to consider when comparing the model's estimated emissions for various project alternatives against a baseline value to determine impacts.

Other Variables

With the current understanding, project-level analysis of greenhouse gas emissions has limitations. Although a GHG analysis is included for this project, there are numerous external variables that could change during the design life of the proposed project and would thus change the projected CO₂ emissions.

First, vehicle fuel economy is increasing. The EPA's annual report, *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2016*,¹² which provides data on the fuel economy and technology characteristics of new light-duty vehicles including cars, minivans, sport utility vehicles, and pickup trucks, confirms that average fuel economy improves each year with a noticeable rate of change beginning in 2005. Corporate Average Fuel Economy (CAFE) standards remained the same between model years 1995 and 2003, subsequently increasing to higher fuel economy standards for future vehicle model years. The EPA estimates that light duty fuel economy rose by 29 percent from model year 2004 to 2015, attributed to new technology that improved fuel economy while keeping vehicle weight relatively constant. **Table 3-2** shows the increases in required fuel economy standards for cars and trucks between Model Years 2012 and 2025, from the National Highway Traffic Safety Administration for the 2012–2016 and 2017–2025 CAFE Standards.

Table 3-2. Average Required Fuel Economy (mpg)

	2012	2013	2014	2015	2016	2017	2018	2020	2025
Passenger Cars	33.3	34.2	34.9	36.2	37.8	39.6-40.1	41.1-41.6	44.2-44.8	55.3-56.2
Light Trucks	25.4	26	26.6	27.5	28.8	29.1-29.4	29.6-30.0	30.6-31.2	39.3-40.3
Combined	29.7	30.5	31.3	32.6	34.1	35.1-35.4	36.1-36.5	38.3-38.9	48.7-49.7

Sources: EPA, 2013, <http://www.epa.gov/fueleconomy/fetrends/1975-2012/420r13001.pdf>;
 EPA, 2012, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2017-and-later-light-duty-vehicle#rule-summary>.

¹¹ Matthew Barth, Kanok Boriboonsomsin. 2009. *Energy and emissions impacts of a freeway-based dynamic eco-driving system*. Transportation Research Part D: Transport and Environment, Volume 14, Issue 6, August 2009, Pages 400–410

¹² <https://www.epa.gov/fueleconomy/light-duty-automotive-technology-carbon-dioxide-emissions-and-fuel-economy-trends-1975-1>

Second, new lower-emission and zero-emission vehicles will come into the market within the expected design life of this project. According to the 2013 Annual Energy Outlook (AEO2013):

LDVs that use diesel, other alternative fuels, hybrid-electric, or all-electric systems play a significant role in meeting more stringent GHG emissions and CAFE standards over the projection period. Sales of such vehicles increase from 20 percent of all new LDV sales in 2011 to 49 percent in 2040 in the AEO2013 Reference case.¹³

The greater percentage of lower-emissions and zero-emissions vehicles on the road in the future will reduce overall GHG emissions as compared to scenarios in which vehicle technologies and fuel efficiencies do not change.

Third, California adopted a low-carbon transportation fuel standard in 2009 to reduce the carbon intensity of transportation fuels by 10 percent by 2020. The regulation became effective on January 12, 2010 (codified in title 17, California Code of Regulations, Sections 95480-95490). Beginning January 1, 2011, transportation fuel producers and importers must meet specified average carbon intensity requirements for fuel in each calendar year.

3.2.3.3 Construction Emissions

Construction GHG emissions would result from material processing, onsite 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. Construction GHG emissions were calculated using the Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model, and were estimated to total 3,563 metric tons of CO₂e over the course of the 36-month construction period.

Caltrans Standard Specifications Section 14-9.02, a part of all construction contracts, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes of CARB, regional and local air pollution control districts, and Government Code Section 11017. In addition, measures COM-1 through COM-5 will be implemented as part of a traffic management plan designed to maintain traffic flow and minimize traffic delay and additional VMT during construction, which will help reduce extra GHG emissions from vehicle exhaust.

3.2.4 CEQA Conclusion

As discussed above, GHG emissions would increase from existing levels under the proposed Build Alternative in both 2024 and 2045, while they would decrease from existing level when compared to the no-build alternatives. Future GHG emissions under the proposed Build

¹³ [http://www.eia.gov/forecasts/ao/pdf/0383\(2013\).pdf](http://www.eia.gov/forecasts/ao/pdf/0383(2013).pdf)

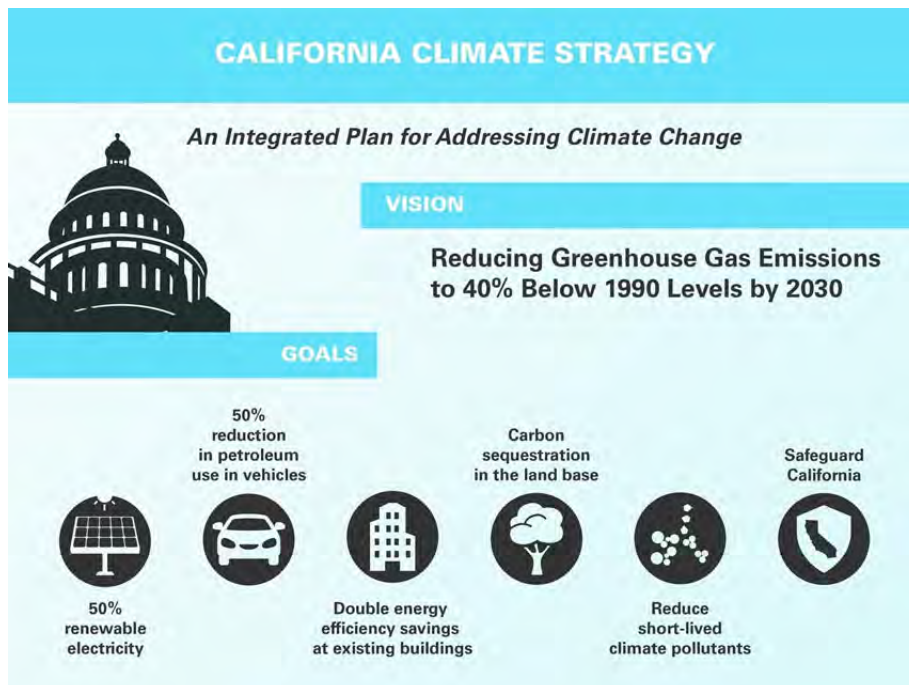
Alternative is also expected to be higher than under the No Build Alternative. Nonetheless, there are also limitations with EMFAC and with assessing what a given CO₂ emissions increase means for climate change. Therefore, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

3.2.5 Greenhouse Gas Reduction Strategies

3.2.5.1 Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts) illustrated in **Figure 3-3**. 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. 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.

3.2.5.2 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 SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs.

While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

3.2.6 Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project. This list includes measures recommended in the SCAG 2016-2040 PEIR that incorporate Best Available Control Technology to be employed during project design, construction, and operation as avoidance and minimization measures to minimize GHG emissions:

- GHG-1** The project will incorporate ITS elements to help manage the efficiency of the highway system. For example, the project will install vehicle detection stations to facilitate dynamic pricing on the Express Lanes to manage traffic so it will not exceed threshold LOS levels. Changeable message signs will improve traveler information so motorists can avoid delays.
- GHG-2** The project will incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs—or balls, in the stoplight vernacular. The LED balls themselves consume less electricity than traditional lights, which will also help reduce the project's CO₂ emissions.
- GHG-3** Construction will be staged to minimize associated delays and congestion. When short-term full freeway closure is necessary, it will be scheduled for nighttime to minimize impacts on motorists. Interchange work will be staggered to avoid closing two consecutive interchanges or two consecutive on- or off-ramps at the same time.
- GHG-4** Revegetate disturbed land.
- GHG-5** Utilize grid-based electricity and/or onsite renewable electricity generator where available and practical rather than diesel and/or gasoline powered generators.
- GHG-6** Maintain all construction equipment in proper working order, according to manufacturer's specifications. The equipment must be checked by an ASE-certified mechanic and determined to be running in proper condition before it is operated.

3.2.7 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.

3.2.7.1 Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011¹⁴, 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.”¹⁵

To further the U.S. DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events)¹⁶. 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 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.¹⁷

¹⁴ <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

¹⁵ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹⁶ <https://www.fhwa.dot.gov/legregs/directives/orders/5520.cfm>

¹⁷ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

3.2.7.2 State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences 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)¹⁸ 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)¹⁹, 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

¹⁸ 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

¹⁹ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

update²⁰ 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.

²⁰ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document>

Chapter 4. Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including PDT meetings, interagency coordination meetings, Community Advisory Group (CAG) meetings, and a public scoping meeting. This chapter summarizes the results of the SBCTA's and Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Public Information Meeting

As part of the public outreach for the I-15 CP, an open house-style public information meeting took place on November 12, 2015, at the Ontario Airport Hotel & Conference Center at 700 North Haven Avenue, Ontario, from 5:00 p.m. to 8:00 p.m. At the public information meeting, project factsheets were available in English and Spanish. A Spanish-speaking project team member was available to assist with any translation needs. The three-hour meeting gave the public an opportunity to review exhibits and literature and more importantly provided an opportunity to speak one-on-one with members of the technical team and ask questions about the proposed I-15 Corridor Project.

The public was notified of the meeting in several ways, including the following: a notice in the November 5, 2015, edition of the Press Enterprise (San Bernardino North Zone Edition); a notice in the November 6, 2015 edition of La Prensa; an invitation mailed to property owners within a quarter-mile radius of the proposed project area; an electronic invitation sent to stakeholder agencies on November 9, 2015; and an invitation graphic posted on SBCTA social media outlets on November 5, 2015 publicizing the meeting.

Approximately 20 people attended the public information meeting. Four comment cards were filled out and submitted. Comments included the following:

- Question about if soundwalls would be built in residential areas as freeway noise already an issue on I-15 (resident lives in Rancho Cucamonga);
- Concerns of egress and ingress from toll lanes to access local businesses along the corridor; impacts on local streets if people divert to avoid toll lanes;
- Questions about financing of the project and repayment — some participants were skeptical about the toll lanes as an effective financing tool and the need for toll lanes

4.2 Consultation and Coordination with Public Agencies

The following provides a summary of all coordination relevant to the development of the project during Project Initiation and PA&ED phases. Agency correspondence letters and emails are provided at the end of this chapter in Section 4.4.

4.2.1 Farmland

On October 26, 2017 two Form NRCS-CPA-106s, one prepared for San Bernardino County and one for Riverside County, were submitted to the NRCS Redlands office for review.

On December 18, 2017 the NRCS Office provided the fully completed forms.

On January 18, 2018 a meeting was held with Tomas Aguilar-Campos, the District Conservationist of the NRCS Redlands office, for purposes of resolving inconsistencies related to the completed forms versus existing conditions in the project area.

Subsequent to this meeting, NRCS indicated that because the NRCS-CPA-106 forms were based on data directly related to existing FMMP data, the completed forms would not be revised.

4.2.2 Cultural Resources

Historic Properties

On February 26, 2016, a letter and map set were sent to consulting and interested parties that may have knowledge of or concerns about historic properties in the area. The letter requested information regarding any known historic buildings, districts, sites, objects, or archaeological sites of significance within the project area. An example letter is included in Section 3.4. Follow-up phone calls were made to the parties on March 28 and 30, 2016.

- The Riverside County Planning Department responded on March 31, 2016, stating that it was not aware of any cultural resources in the project area.
- The San Bernardino County Planning Commission responded on March 31, 2016, asking for an additional copy of the public participation letter; the commission wanted to consult internally with its members to determine if they are aware of any cultural resources in the project area. No further response was received.
- Jack Easton of the Riverside Land Conservancy called on March 31, 2016, to state via telephone that the conservancy was not aware of any historic resources in the project area.
- On May 5, 2016, Jill Jensen, an archaeologist at the NPS, contacted Tim Watkins of the SBCTA via email, providing information about the Old Spanish National Trail, which crosses underneath I-15 on the north side of Philadelphia Avenue.

Elizabeth Hilton attempted to contact Jill Jensen, NPS archaeologist, via email on May 9, 2016; however, she was out of the office for an extended period of time. Ms. Hilton was directed to Derek Nelson, NPS GIS specialist, who provided the exact location of the Old Spanish National Trail. The provided shapefile was used to determine that the Old Spanish National Trail crosses the APE in one location. However, the setting at this location has been altered by new construction within the urban landscape, including I-15. As confirmed by the archaeological survey of the APE, the trail is no longer present in the APE. The cultural staff at the NPS did not have any further information about the Old Spanish National Trail at the project location.

- On May 11, 2016, Dat Tran, a planner for the City of Rancho Cucamonga, contacted Elizabeth Hilton of ICF International via email, inquiring about the distance between the I-15 right of way and a local historical resource, 7567 Etiwanda Avenue, which is two parcels outside of the APE. After a follow-up phone conversation, Mr. Tran wrote on May 19, 2016, informing ICF about this local resource and emphasizing that “stringent dust-control and construction vibration-reduction techniques should be employed to prevent any potential damage to the house during the course of construction.” A copy of the email exchange is provided in Section 3.4.

Ms. Hilton spoke on the phone with Mr. Tran on May 20, 2016 to explain the anticipated negligible potential for fugitive dust reaching the historical resource at 7567 Etiwanda Avenue. The historic site is more than 500 feet away from the proposed improvements on I-15. In addition, at that location. Improvements include only lane striping and there is no proposed pavement widening north of Foothill Boulevard. Localized foundation and sign structure installation would be required at certain locations that would be determined during the Design-Build phase of the project. Additional utility trenching may also occur within the existing Caltrans right of way. Standard construction best practices would be implemented during construction ensuring the historic property at 7567 Etiwanda Avenue in Rancho Cucamonga would not be affected by dust or other potential indirect effects. Hence, this property need not be included in the APE. An email response summarizing the phone call was provided on December 7, 2016.

- The California Route 66 Preservation Foundation responded by telephone to say that the proposed project would have no impact on Route 66.
- Kevin Hallaran at the Riverside Metropolitan Museum said via telephone that he was not aware of any specific resources near the project area, but recommended looking for dairies, wineries, or remnants of the sort because they were common property types in the area before they were replaced with newer construction.

Native American Consultation

Native American Heritage Commission (NAHC)

Caltrans District 8 contacted the NAHC regarding the proposed project. The NAHC stated that a search of its Sacred Lands Database did not yield any information regarding sacred lands or traditional cultural properties within the project area. The NAHC provided a list of six Native American contacts in the region.

Native American Tribes, Groups and Individuals

The Caltrans District 8 Native American Coordinator sent letters to the six Native American tribal representatives identified by the NAHC. At the request of Caltrans District Native American Coordinator Gary Jones, the consultant placed telephone calls on November 30, 2016, to the Native American contacts who had not responded. Messages were left with these contacts requesting a response if they had comments or concerns regarding the project. Two responses were received each from the tribes of the Gabrieleno Band of Mission Indians, and Soboba Band of Luiseno Indians. In their letters, the tribes requested that Native American monitoring be provided by their certified monitors during construction activities of the project. Denial letters of

Native American monitoring were sent to the two tribes. The denial was based on conditions identified in Caltrans policy and practice and summarized in the denial letters. Based on Caltrans policy and practice, Native American monitoring is solicited in the following cases: during archaeological excavations, during construction activities in areas adjacent to known Native American archaeological or cultural sites, and during construction activities in areas where there is a high probability that there may be buried deposits. The identification efforts summarized in Section 2.1.11 of this document, based on the Archaeological Survey Report prepared for the project did not identify either a historic property within or adjacent to the project area, or a high probability of intact, buried cultural deposits. A summary of the correspondence is provided in **Table 4-1**.

Table 4-1. Native American Tribes, Groups, and Individuals Contacted for the Project

Name/ Affiliation	Summary of Contact:
Andrew Salas Gabrielino Band of Mission Indians	2.17.16: Letter mailed to Mr. Salas by Caltrans. 2.29.16: Mr. Salas requested Native American monitoring. 2.28.17: Denial letter citing Gary Winters memo mailed to Mr. Salas.
Sam Dunlap Gabrielino/Tongva Nation	2.17.16: Letter mailed to Mr. Dunlap by Caltrans. 11.30.16: Telephone message left for Mr. Dunlap asking him to respond if he has any comments or concerns about the project.
Mark Macarro Pechanga Band of Luiseno Indians	2.17.16: Letter mailed to Mr. Mark Macarro by Caltrans. 11.30.16: Telephone call to Band, referred to Cultural Resources Department, message left asking for a response if the Band has any comments or concerns about the project.
Lynn Valbuena San Manuel Band of Mission Indians	2.17.16: Letter mailed to Ms. Valbuena by Caltrans. 11.30.16: Telephone call to Band, referred to Cultural Resources Department (Kate Larson) -- message left asking for a response if the Band has any comments or concerns about the project.
Goldie Walker Serrano Nation of Mission Indians	2.17.16: Letter mailed to Ms. Walker by Caltrans. 11.30.16: Telephone message left for Ms. Walker asking her to respond if she has any comments or concerns about the project.
Rosemary Morillo Soboba Band of Luiseno Indians	2.17.16: Letter mailed to Ms. Morillo by Caltrans. 3.17.16: Mr. Joseph Ontiveros responded for the Band, requesting Native American monitoring and deferring to the San Manuel Band for this project. 2.28.17: Denial letter citing Gary Winters memo mailed to Mr. Ontiveros.

4.2.3 Interagency Coordination (TCWG)

A PM Conformity Hot Spot Analysis Project Summary Form for Interagency Consultation was prepared for the project and presented for consideration by the SCAG Transportation Conformity Working Group (TCWG) at their May 22, 2016 meeting. In light of comments received from TCWG members at the May 22, 2016 meeting, follow-up responses were provided by the project team at the July 26, 2016 meeting, and the TCWG concurred with the determination that the project would not be a project of air quality concern and no quantitative PM hotspot analysis would be required for the project via email on August 4, 2016.

4.2.4 Biological Resources

United States Fish and Wildlife Service

A conference call was held on May 13, 2016, between USFWS, Caltrans, and consultant staff attending on behalf of the project sponsor, SBCTA, to discuss Delhi Sands flower-loving fly surveys, coastal California gnatcatcher surveys, San Bernardino kangaroo rat critical habitat and trapping, and listed fairy shrimp. The meeting was held to discuss not trapping San Bernardino kangaroo rats during surveys, and instead use avoidance and minimization measures to support the No Effect determination. In lieu of trapping, USFWS staff requested the use of a barrier fence to prevent work from encroachment in San Bernardino kangaroo rat suitable habitat area.

In the conference call conducted on May 13, 2016, USFWS requested that a two years protocol survey be conducted for the Delhi Sands flower-loving fly. On September 2, 2016, Ken Osborne (Osborne Biological Consulting) emailed USFWS to request a deviation in Delhi Sands flower-loving fly survey protocol from 10:00 a.m. to 3:00 p.m. (2:00 p.m. is the protocol survey end time) due to cool, overcast conditions that delayed the start time. On September 8, 2016, Geary Hund (USFWS) replied via email approving the change in survey end time.

A memo was developed and transmitted to USFWS on April 7, 2017, to request concurrence on the No Effect determination. An email was received from John M. Taylor on June 19, 2017, to indicate that USFWS considers the decision appropriate with the implementation of the proposed avoidance measures.

On November 2, 2017, an updated official USFWS List of Proposed, Threatened, and Endangered Species, and Critical Habitats was obtained through the USFWS Information System.

Another updated list was obtained on July 17, 2018. The July 2018 list is included at the end of this chapter.

Regional Conservation Authority

The most southern portion of the project, approximately 3.4 miles in length, is located within Riverside County and the Western Riverside County MSHCP. A meeting on January 19, 2016, was held with the Western Riverside County Regional Conservation Authority (RCA), USFWS, and CDFW to introduce the project and address consistency of the project limits located within Riverside County with MSHCP. The following decisions were made:

- To avoid a DBESP for Jurisdictional feature at Mission Boulevard, tributary to Day Creek, the project will be designed to fully avoid the potential jurisdictional feature.
- RCA confirmed that the project is not subject to the Joint Project Review (JPR) process and that Caltrans is the lead agency and is responsible for consulting with USFWS and CDFW for MSHCP consistency review. RCA required that the NES be prepared to clearly identify the biological resources and species that occur within the MSHCP for efficient reviews of survey results and impact analysis by the regulatory agencies.

- The NES document was transmitted to USFWS, and CDFW for consistency review on February 20, 2018. Consistency concurrence was received in an email dated June 5, 2018 from John M. Taylor on behalf of the USFWS and CDFW.

US Army Corps of Engineers

A conference call was held with USACE on July 17, 2018 to discuss requirements for the preparation of Approved Jurisdictional Delineation (AJD) and a Preliminary Jurisdictional Delineation (PJD) for the project. A request for an AJD and PJD was submitted to USACE on July 25, 2018. A final AJD and PJD were issued by the USACE on August 3, 2018 and July 27, 2018, respectively. The Wetland Delineation Report, along with the final AJD and PJD, will be submitted to the USACE, RWQCB, and CDFW during the Design-Build phase of the project to support obtaining a Nationwide Permit under CWA Section 404, a 401 Water Quality Certification, and a 1602 Lake and Streambed Alteration Agreement, respectively. Correspondence regarding coordination with USACE are included in Appendix G, AJD and PJD Documents.

4.3 Public Participation

4.3.1 SBCTA Outreach

Prior to the beginning of technical studies for the I-15 Corridor Project, SBCTA established a community participation program that included stakeholders' interviews, public and agency briefings, Community Advisory Groups (CAGs) meetings, social media, and websites. These efforts are described below.

Stakeholder Interviews

One-on-one interviews were conducted with 52 stakeholders including members of SBCTA board, elected officials (non-SBCTA board members), operational participants and government officials, community groups and special interest group leaders, and representatives of the business community. The purpose of the interviews was to collect opinions and document perceptions regarding project alternatives as well as other transportation issues in the region.

CAGs

Three Community Advisory Groups (CAGs) were formed, including the West Valley CAG; the East Valley CAG; and the High Desert CAG. The members provide representation from residential and homeowner associations; neighborhood councils; faith-based organizations; the business, labor, and environmental communities; and economic development groups in the I-10 and I-15 project corridors. To date, there have been 10 sets of meetings with each of the CAGs. These CAG meetings have enabled consistent high-quality interaction and feedback from representative voices for both corridors. CAG meetings were open to all interested public members. Information was given at the meeting to provide updates on the I-15 and I-10 project development efforts and respond to attendees' questions. The CAG members helped by disseminating information about the project to their communities and by generating invaluable first-hand feedback regarding the consideration of issues associated with the corridor. All feedback received from the CAG members has been documented and posted on the SBCTA website in the form of CAG meeting minutes (SBCTA 2015). It is noted that the first seven sets of CAG meetings occurred prior to the

beginning of technical studies for the I-15 Corridor Project, and that the I-10 Corridor Project was the primary focus of the last three sets of CAG meetings.

Briefings

As part of the stakeholder interviews, some of the SBCTA board members requested that the SBCTA staff and its consultants participate at their respective city council meetings and/or other community forums to present information and status updates on the I-10 and I-15 Corridor Projects, particularly on the express lanes–related issues. These briefings provided additional outreach opportunity. A total 147 briefings were conducted, of which 81 briefings were held between spring of 2015 and early 2016 for stakeholders including local governments (elected officials and city staff members), boards, committees, and community-based groups (e.g., chambers of commerce, rotary clubs, Kiwanis clubs, neighborhood committees, educational facilities). The 81 briefings between spring of 2015 and early 2016 occurred after the beginning of the technical studies for the I-15 CP. Presentation included information on the I-10 and I-15 Corridor Projects, but discussion was geared toward the I-15 CP based on the interest of the stakeholders. Audience sizes ranged from 10 to 100 people, with an average attendance of approximately 30 people. The objective of the briefings was to foster awareness of the projects, generate public input, and encourage the stakeholder groups to distribute project information and future public involvement opportunities to their constituencies. The meetings were highlighted on the project website homepage (www.1015projects.com), along with a scheduled briefings map so that a member of the public could find information about the meetings. Various questions received and answered at each of the presentations were used to develop the FAQs on the project website.

Project Website

An official I-10 and I-15 Corridor Projects website (www.1015projects.com) was developed to provide a dynamic platform to share the latest project information and provide a tool for two-way communication with the public and stakeholders. The website includes features such as General Project Information, Environmental Review, and Public Outreach Information. A form is available on the website for submitting questions and concerns. The website will be continuously updated with new information and documents as they become available for public review. A website (www.gosbcta.com/i15corridor) specifically for the I-15 CP was activated in January 2018.

Social Media

The Facebook and Twitter accounts servicing the I-10 and I-15 Corridor Projects are listed on the header and footer of each webpage of the project website. These links are meant to provide ease of access for stakeholders that want to “follow” or “like” the social media pages, which serve as another set of two-way communication tools to keep the public informed of the latest project updates. To date, limited interaction has taken place on Twitter and Facebook regarding the I-15 Corridor Project.

4.3.2 Draft Environmental Document Public Circulation

The *Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment* (Draft Environmental Document) prepared for the I-15 CP project was circulated for public review and comments between February 15, 2018 and March 16, 2018. A public notice was published twice in newspapers of general circulation for the combined Notice of Intent to Adopt an MND and Notice of Availability of the EA prepared for the project, as well as for the Announcement of a Public Hearing. The notices were published in English in the Daily Bulletin and in the Press Enterprise on February 15, 2018 and February 22, 2018 and in the Fontana Herald News on February 16, 2018 and February 23, 2018. Additionally, notices were published in Spanish in La Prensa on February 16, 2018 and February 23, 2018. The notices identified the proposed project and provided information on the purpose of the Draft Environmental Document and the locations and formats available; on the review comment period, and contact information for the submittal of comments and/or for further information. In addition, the notices provided information on the location and date of the public hearing. Along with publication in the newspapers, a copy of the public notice in English and Spanish was mailed to addresses within a quarter mile of the project limits; to federal, state, regional, and local agencies; to elected officials, interested groups and individuals, and to utility and service providers.

In conjunction with the public circulation and review of the Draft Environmental Document, a public hearing was held for the project on Thursday, March 1, 2018 from 5:30 p.m. to 7:30 p.m. at Etiwanda Intermediate School located at 6925 Etiwanda Avenue in the City of Rancho Cucamonga. Representatives from SBCTA and Caltrans were available to provide information and respond to comments and questions at the meeting. Spanish Language Translators were available to provide assistance as needed. The meeting was attended by 24 members of the public. Questions and discussion during the meeting included the following topics: the need for noise barriers, noise and air quality construction impacts, local traffic circulation, project funding, type of the environmental document, and support for the project.

In addition, in compliance with CEQA requirements, a Notice of Completion was submitted to the State Clearinghouse for distribution to state agencies. A letter was received from the State Clearinghouse (SCH) at the end of the 30 days review period ending in March 16, 2018.

Comments received in the Draft Environmental Document are addressed in the Comments and Responses to Comments Section 4.3.3 of this document. Following are copies of the public notices as placed in the newspapers, and SCH correspondence.

Public Notices

THURSDAY, FEBRUARY 15, 2018

INLAND VALLEY DAILY BULLETIN • DAILYBULLETIN.COM | NEWS • 5



THE ASSOCIATED PRESS

U.S. Immigration and Customs Enforcement agents gather before serving an employment audit notice at a 7-Eleven convenience store last month in Los Angeles. Agents said they targeted about 100 7-Eleven stores nationwide to open employment audits and interview workers.

Sweep

FROM PAGE 1

increasing the incidents of collateral arrests.

"Sanctuary cities are not immune from federal law," officials said in the statement.

ICE officials also said that they no longer are following a priority criteria for arrests, so "all of those in violation of the immigration laws may be subject to immigration arrest, detention and, if found removable by final order, removal from the United States."

ICE officials told the Wall Street Journal earlier this week that most of those they are targeting have serious crimes on their record, some are suspected of crimes and others were previously ordered to leave the country.

ICE's Los Angeles-area fugitive operations teams conduct enforcement operations across Southern California, including in Los Angeles, Orange, Riverside, San Bernardino, Ventura, Santa Barbara and San Luis Obispo counties.

In the Inland area, at least one deportation is being attributed to the ICE arrests.

Jennaya Dunlap, an emergency response coordinator with the Inland Coalition for Immigrant Justice, said a Riverside father of three U.S. citizens was deported.

Dunlap said a number of people called the organization's new hotline number and reported ICE arrests across the Inland area between Sunday and Tuesday.

"Some of these cases were people who had old convictions," she said.

The operation comes as city leaders and the Los Angeles Police Department are working to revise rules

for working with ICE and other federal immigration enforcement agencies.

LAPD Chief Charlie Beck issued an internal 11-page memo that includes some updates to department procedures for working with ICE as part of joint task forces and the collection of certain types of information that may be considered sensitive for immigrants. This memo adds to existing policies, such as Special Order 40, a 1979 document that tells LAPD officers not to actively enforce and investigate civil immigration violations.

Despite calls by immigrant advocates to have the city completely stop working with ICE, city leaders and law enforcement officials say they cannot control what their federal counterparts do, and it is often necessary to partner with ICE during task force operations.

Los Angeles does not officially consider itself a sanctuary city, but that may soon change. The City Council is discussing a resolution that would label L.A. a "city of sanctuary," though the proposal currently does not contain any substantive changes to city policies.

Xochilt Sanchez, an organizer with immigrant advocacy group CARECEN, said the latest raids are "retaliation, point blank" by ICE for certain policies the city has adopted aimed at protecting immigrants. But she said this week's ICE operation is an example of why the city needs to do more beyond making "empty statements" about being a potential "sanctuary."

She said "political representatives need to stand up for their constituents more and use their political power to ensure these ICE raids are

no longer happening."

Another organizer, David Abud, who works with a group called ICE Out of L.A., said they are "seeing more of these operations now, and they are becoming more routine."

"The way we understand it ... these are political tactics being used by ICE to further terrorize communities and to weaponize what is supposed to be a law enforcement mechanism for political means," he said.

The Los Angeles City Council has been discussing the city's policies around immigration enforcement in a committee chaired by Councilman Gil Cedillo.

Cedillo said the city is "opposed to blanket ICE raids that endanger individuals who are not targeted for deportation and without the appropriate warrant."

"ICE has gone back on its promise to respect sensitive spaces, turning it into an all-out assault on immigrant communities," he said.

He added that the city's "uncooperative" policies are not what's causing ICE to conduct their fear-mongering raids in our communities.

"It's part of their retaliatory strategy against sanctuary cities who don't fall in line with their draconian immigration policies," he said. "Nothing will keep us from being a sanctuary city, county or state."

The L.A. Raids Rapid Response Network, which is coordinated by immigrant advocacy group CHIRLA, issued a statement as well, offering access to a hotline to "families and loved ones of those detained by ICE at home or work to reach out for support, including potential consultation with an immigration attorney" at 888-624-4752. They also

referred to a "know your rights" pamphlet by the ACLU that can be found online.

Meanwhile, law enforcement officials in the city of Los Angeles said they had no part in the latest operation, saying in a statement that "no LAPD resources were involved in recent ICE enforcement actions in the city of Los Angeles."

The LAPD's position has been that its officers do not take part in "civil immigration enforcement."

Since President Donald Trump took office, the number of people apprehended at the border dropped but arrests of immigrants inside the country surged, according to end-of-year immigration enforcement numbers released in December by the

Department of Homeland Security.

The data show "results of a yearlong return to enforcing the law," the Department of Homeland Security said in a statement.

In fiscal 2017, ICE made 143,470 arrests, a 25 percent increase over the 114,434 who were arrested a year earlier.

"The president made it clear in his executive orders: There's no population off the table," Thomas Homan, ICE's acting director, said in December. "If you're in this country illegally, we're looking for you and we're going to look to apprehend you."

Staff writers Brenda Gazzar, Wes Woods II and Alejandra Molina contributed to this report.

Nopales

FROM PAGE 1

Stater Bros. Markets spokeswoman Marisa Kutansky said the company received notification of the nopales recall Jan. 30 and determined that only eight cases of the product had been shipped to its stores.

"We identified those specific cases of product but out of an abundance of caution, we decided to destroy all product in all stores as well as all product in our warehouse," Kutansky wrote in an email. "Furthermore, this product is no longer carried in any of our stores."

Health officials said inspectors quarantined or destroyed the tainted nopales they found in distribution centers and on store shelves. However, they believe contaminated nopales may have been sold to more stores in California, Oregon and Nevada.

"Many Californians eat cactus as part of their diet, but the pesticide levels we have found at some specific locations are concerning," Department of Pesticide Regulation Director Brian Leahy said in the release.

Inspectors detected several pesticides at levels carrying health risks. The pesticides include dimethoate and omethoate as well as monocrotophos and methidathion.

SLICE OF WRY

What do farmers give to their spouses on Valentine's Day? Hogs and kisses

Do you have a suggestion for Slice of Wry? We want to hear it. Please include your name, city of residence, and a number where you can be reached. Email: CITY-DESK@INLANDNEWSPAPERS.COM.

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PUBLIC NOTICE



Notice of Intent to Adopt a Mitigated Negative Declaration
Notice of Availability of an Environmental Assessment
Announcement of Public Hearing for Interstate 15 Corridor Project



WHAT'S BEING PLANNED?
The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans) proposes to construct tolled Express Lanes in both directions of Interstate 15 (I-15) from approximately 0.3 miles south of Santa Galliano Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 48.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The proposed I-15 Corridor Project extends for approximately 14.7 miles from Riverside County Post Miles 48.8-52.3 to San Bernardino County Post Miles 0.0-12.2 and would add two Express Lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Santa Galliano Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. The purpose of the project is to reduce congestion, increase mainline capacity, improve travel time within the corridor, and improve trip reliability and mobility options along the corridor. The proposed project is currently expected to be open to traffic in 2024.

Project-level conformity analysis shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for carbon monoxide (CO) and particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met without an explicit hot-spot analysis. The project completed interagency coordination via Southern California Association of Governments' Transportation Conformity Working Group (TCWG), at a meeting on May 24, 2016. At this meeting, the TCWG identified that the proposed project is not a Project of Air Quality Concern (PQAQC). The United States Environmental Protection Agency, Caltrans, and the Federal Highway Administration concurrence in this regard was received via email after the July 26, 2016 meeting.

The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Comment is requested regarding the project-level conformity analysis.

WHY THIS AD?
Caltrans has studied the effects this project may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called an Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment. This notice is to tell you of the preparation of the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and of its availability for you to read.

A public hearing is being held to provide an opportunity to ask questions of Project Team members regarding design features, the tentative schedule for this proposed project including when and how the project will be constructed, and anticipated right of way requirements, before the final design is selected.

WHAT'S AVAILABLE?
Copies of the approved Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, including associated maps, as well as the technical studies relied upon in conjunction with its preparation, are available for review at the following locations, during respective normal business hours:

San Bernardino County Transportation Authority, 1170 West Third Street, Second Floor San Bernardino, CA 92410-1715, Glen Avon Regional Library, 9244 Galena St., Jurupa Valley, CA 92509, Eastvale Branch Library, 7447 Scholar Way, Eastvale, CA 92580, Overt Family Community Library, 215 East "C" Street, Ontario, CA 91764-4111, Paul A. Blume Library, 12505 Cultural Center Drive, Rancho Cucamonga, CA 91739, Fontana Lewis Library & Technology Center, 8437 Sierra Avenue, Fontana, CA 92335-3892. Additionally, the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may be downloaded at the following website: www.gasbcta.com/I15corridor

WHERE YOU CAN COME
Have the potential impacts been addressed? Do you have additional information that should be considered for the proposed project? Do you have any comments about processing the project with a Mitigated Negative Declaration and the Initial Study/Environmental Assessment? Do you disagree with the findings of our study as set forth in the Proposed Mitigated Negative Declaration? Would you care to make any other comments on the project? Your comments will be a part of the public record. If you wish to make a comment, please submit your comments in writing no later than Friday, March 16, 2018, to:

James Shankel, Senior Environmental Planner - California Department of Transportation
464 West 4th Street, 6th Floor, MS-627, San Bernardino, California 92410-1715 or via email to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email.

The date we will begin accepting comments is Thursday, February 15, 2018. Comments regarding the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may also be submitted in person at the public hearing on March 1, 2018. If there are no major comments, SBCTA, in cooperation with Caltrans, will proceed with the project's design.

WHERE AND WHEN?
The public hearing will be in an open house format on **Thursday, March 1, 2018, from 5:30pm to 7:30pm** at Escondido Intermediate School, in the Multipurpose Room, 8325 Escondido Avenue, Rancho Cucamonga, CA 91739.

Individuals who require special accommodations (American Sign Language or other linguistic interpreters, accessible seating, documentation in alternate formats, etc.) are requested to contact Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at least three business days prior to the date of the scheduled public hearing at (909) 864-8276 (voice), or use the California Relay Service, at (800) 363-6300 (TTY).

CONTACT
For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at (909) 864-8276. Thank you for your interest in this important transportation project.

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SUPREME COURT

Justices vote to narrow whistleblower protections

By Jessica Gresko
The Associated Press

WASHINGTON » The Supreme Court ruled Wednesday that whistleblower protections passed by Congress after the 2008 financial crisis only apply to people who report problems to the U.S. Securities and Exchange Commission, not more broadly.

The justices said that a part of the Dodd-Frank Act that protects whistleblowers from being fired, demoted or harassed only applies to people who report legal violations to the SEC. They said employees who report problems to their company's management but not the commission don't qualify.

People who report issues to their company's management, to another federal agency or to Congress are still protected against retaliation but under an older law, the 2002 Sarbanes-Oxley Act. But the two laws differ in a number of ways, including how long people have to bring a lawsuit and how much money they can get in compensation. A person who wins a lawsuit under the Dodd-Frank Act's whistleblower protection provision can get more money than someone who

wins under the Sarbanes-Oxley Act's provision.

The justices were unanimous in agreeing that the whistleblower protection in the Dodd-Frank Act only covers people who report to the SEC. Writing for the court, Justice Ruth Bader Ginsburg said "Dodd-Frank's text and purpose leave no doubt" about who the term "whistleblower" applies to.

"The definition section of the statute supplies an unequivocal answer: A 'whistleblower' is 'any individual who provides ... information relating to a violation of the securities laws to the Commission,'" she wrote.

The SEC had interpreted the whistleblower protection in the Dodd-Frank Act more broadly, an interpretation the Supreme Court rejected.

The court's ruling comes at a time when the Trump administration has already laid out changes it wants to make to the 2010 Dodd-Frank Act, which the administration believes went too far and has hurt economic growth. President Donald Trump has repeatedly attacked the law as a "disaster" and has promised to do "a big number" on it.

The Trump administration had nonetheless argued that the law did provide broad protection. Businesses had opposed that reading of the law.

The case the court ruled in involves Paul Somers, who worked for San Francisco-based Digital Realty Trust Inc., a real-estate investment trust that owns data centers worldwide. Somers was the company's second in command in Singapore when he made accusations to senior managers that his boss had hidden millions of dollars in cost overruns, granted no-bid contracts and made payments to friends, among other things.

Somers was fired in 2014 after making the allegations.

He sued, saying his firing was a retaliation that violated the Dodd-Frank Act. He also alleged he had been discriminated against for being gay. Lower courts had sided with Somers, saying he was entitled to whistleblower protections even though he didn't disclose his allegations to the Securities and Exchange Commission.

The case is 16-1276, Digital Realty Trust Inc. v. Somers.

MORTGAGES

Rising prices, shortages lead to drop in home sales

By Christopher Rugaber
The Associated Press

WASHINGTON » U.S. sales of existing homes fell in January from a year earlier by the most in more than three years. Would-be buyers were stymied by rising prices and a shortage of homes for sale.

The National Association of Realtors said Wednesday that sales dropped 3.2 percent from December to January, the second straight monthly decline, to a seasonally adjusted annual rate of 5.38 million. That was the slowest sales pace since September.

Compared with 12 months earlier, sales dropped 4.8 percent — the steepest year-over-year de-

cline since August 2014.

A lack of available homes is holding back sales, even as Realtors report that more people are visiting open houses and demand is strong. The total supply of homes for sale dipped to 1.52 million, the fewest for any January since records began in 1999. The low inventory levels are a legacy of a decade of boom and bust in U.S. housing. Many investors bought homes at low prices during the housing bust and are now renting them out.

And the Realtors' group said many homeowners are reluctant to sell at a time of rising mortgage rates because they would have to pay a higher rate on a new house, a phenomenon known as "rate lock."

The average 30-year fixed mortgage rate reached 4.38 percent last week, the highest in nearly four years. While that is still a historically low rate, for many homeowners it is much higher than their current mortgage rate.

January's sales stem from contracts that were signed in November or December, so they don't reflect the sharp jump in mortgage rates since the beginning of the year. The average 30-year fixed was just below 4 percent in early January. A sharp rise in the yield on the 10-year U.S. Treasury note has sent mortgage rates up. The 10-year yield has jumped about one-half a percentage point since the start of the year, to 2.9 percent.

PERU

2nd bus this year goes off cliff; 44 dead

By The New York Times

LIMA, PERU » At least 44 people died and 20 others were injured in southern Peru on Wednesday when a passenger bus fell off a cliff on the nation's most important highway — the second such bus accident this year on the notoriously dangerous road.


The two accidents

prompted outrage here that the authorities are not doing enough to prevent such episodes despite their frequency and the loss of life involved. In January, 51 people died when a bus plunged off a cliff along a foggy stretch of road so infamous it is known as the "devil's curve."


Both accidents occurred on the Pan-American High-

way, which stretches the length of the country parallel to the Pacific Ocean. Despite its importance, most of the road is narrow, with a single lane going each way as it meanders through the Andean hills.

As with many highways here, the roadside is dotted with crosses memorializing where people have died in road accidents.

SECOND PUBLIC NOTICE 

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The date we will begin accepting comments is Thursday, March 15, 2018. Comments regarding the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may also be submitted in person at the public hearing on March 1, 2018. If there are no major comments, SBCTA, in cooperation with Caltrans, will proceed with the project's design.

WHERE AND WHEN?
The public hearing will be an open house format on Thursday, March 1, 2018, from 5:30pm to 7:30pm at Etiwanda Intermediate School, in the Multipurpose Room, 6825 Etiwanda Avenue, Rancho Cucamonga, CA 91739.

Individuals who require special accommodations (American Sign Language or other linguistic interpreters, accessible seating, documentation in alternate formats, etc.) are requested to contact Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at least three business days prior to the date of the scheduled public hearing at (909) 884-8276 (voice), or use the California Relay Service, at (800) 363-6300 (TDD).

CONTACT
For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at (909) 884-8276. Thank you for your interest in this important transportation project.

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Police seek public's help in finding man who touched woman inappropriately

The Fontana Police Department is seeking the public's help in identifying a man who allegedly touched a woman inappropriately in a store.

On Jan. 11, the suspect entered the Cricket Wireless store in the 9800 block of Sierra Avenue in Fontana, police said.

After spending some time looking at a mobile phone, the suspect passed the clerk and stuck his hand between her legs near her private area.

The clerk then turned around and grabbed the suspect and asked him what he was doing. The suspect did not say anything and left the business.

The suspect is described as being between 16 and 20 years old, 5-feet-7, heavy set, and last seen wearing a grey sweatshirt and grey shorts. A photo was captured on a security camera.

Persons who know the identity of the suspect are asked to contact Detective Guith at (909) 350-7723.



The suspect seen here in a security camera photo is being sought for touching a woman inappropriately in a Fontana store.

Two men are arrested on burglary charge

Two men, including one from Fontana, were arrested on a burglary charge in Rancho Cucamonga on Feb. 21, according to the San Bernardino County Sheriff's Department.

At 2:30 a.m., deputies from the Rancho Cucamonga Police Department responded to a business in the 12180 block of Baseline Road regarding an alarm activation.

Deputies were informed the alarm company has a live feed camera on the business premises and suspects were seen on camera cutting a hole in the fence and entering the property. They went through several utility vehicles and removed spools of copper wiring, staging them by the hole

they cut in the fence.

The suspects tried to flee the area when the deputies arrived. However, they were taken into custody after a short foot pursuit, the Sheriff's Department said.

Both suspects were booked into West Valley Detention Center with a bail of \$35,000 each. They were identified as Andres Miranda, 31, of Fontana, and Jorge Garcia, 28, of Rancho Cucamonga.

Anyone with information regarding this investigation is urged to contact Deputy Lim at (909) 477-2800. Callers wishing to remain anonymous are urged to call the We-Tip Hotline at 1-800-78-CRIME (27463) or leave information on the We-Tip website at www.wetip.com.

Five people die in crash on Interstate 10 in Rialto

A devastating accident killed five people on the Interstate 10 Freeway in Rialto on Feb. 16, according to the San Bernardino County Sheriff Coroner's Division.

At 12:52 p.m., the California Highway Patrol received 911 calls regarding a major collision in the area of I-10 and Riverside

Avenue.

When officers arrived on scene, they found that a concrete boom pump truck had been traveling westbound on I-10 and for reasons yet to be determined, the driver of the truck lost control. The truck crashed through the metal guardrail separating the east and westbound lanes and entered the

eastbound lanes of traffic. This caused multiple traffic collisions on the eastbound side of the interstate.

All lanes of the freeway were closed until the following morning.

As of Feb. 21, the Coroner's Division had not yet identified the victims of the crash.

Stranger unsuccessfully attempts to lure 13-year-old student into car; FUSD gives message about safety

The Fontana School Police Department was informed by the Fontana Police Department regarding the report of a stranger attempting to lure a 13-year-old student into a car near Oleander Avenue and Stardust Lane during a recent day.

The student ignored the individual's questions and reported the incident to his parents once the student arrived home.

The parents notified the Fontana P.D. and an officer responded to the residence to interview the student regarding what occurred.

The Fontana P.D. is the primary investigating agency and is requesting that anyone with information regarding this incident to call (909) 350-7740.

The Fontana School Police Department provided the following message for parents:

In order to ensure your children's safety, remind them of the following basic rules for times that you are not around:

- Never accept rides, candy, gifts, money or medicine from a stranger.
- Never get close to a car if a stranger calls out to you for directions or anything else. It is easy for a stranger to pull you into a car.
- Never give your name or address to a stranger.
- Never open the door to anyone you do not know.
- Never tell callers that you are home alone. Say mom or dad cannot come to the phone, and will call them back.
- Never volunteer family vacation plans or other information about your home.
- Always avoid strangers who are hanging around restrooms or play areas and who may want to play with you or your friends.

Man is arrested on child pornography charges

A 30-year-old man who was on parole for failure to register as a sex registrant was arrested on child pornography charges on Feb. 14, according to the Fontana Police Department.

Detectives from the Fontana

P.D.'s Internet Crimes Against Children (ICAC) Task Force discovered that Abel Carlos had allegedly distributed child pornography over the Internet.


Carlos was located and arrested in the 18000 block of Bellflower

Street in Adelanto.

A forensic search of his electronic storage devices was ongoing.


He was booked into the Fontana P.D. and later transported to West Valley Detention Center.

For news updates, visit www.fontanaheraldnews.com



SECOND PUBLIC NOTICE

Notice of Intent to Adopt a Mitigated Negative Declaration
Notice of Availability of an Environmental Assessment
Announcement of Public Hearing for Interstate 15 Corridor Project



WHAT'S BEING PLANNED?

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans) proposes to construct tolled Express Lanes, in both directions of Interstate 15 (I-15) from approximately 0.3 miles south of Canto-Galleano Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 48.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The proposed I-15 Corridor Project extends for approximately 14.7 miles from Riverside County Post Miles 48.8-52.3 to San Bernardino County Post Miles 0.0-12.2 and would add two Express Lanes in each direction between Canto-Galleano Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. The purpose of the project is to reduce congestion, increase roadway capacity, improve travel time within the corridor, and improve trip reliability and mobility options along the corridor. The proposed project is currently expected to be open to traffic in 2024.

Project-level conformity analysis shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for carbon monoxide (CO) and particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met without an explicit hot-spot analysis. The project completed interagency coordination via Southern California Association of Governments' Transportation Conformity Working Group (TCWG), at a meeting on May 24, 2018. At this meeting, the TCWG identified that the proposed project is not a Project of Air Quality Concern (Not a POAQC). The United States Environmental Protection Agency, Caltrans, and the Federal Highway Administration concurrence in this regard was received via email after the July 26, 2018 meeting.

The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Comment is requested regarding the project-level conformity analysis.

WHY THIS AD?

Caltrans has studied the effects this project may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called an Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment. This notice is to tell you of the preparation of the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and of its availability for you to read.

A public hearing is being held to provide an opportunity to ask questions of Project Team members regarding design features, the tentative schedule for this proposed project including when and how the project will be constructed, and anticipated right of way requirements, before the final design is selected.

WHAT'S AVAILABLE?

Copies of the approved Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, including associated maps, as well as the technical studies relied upon in conjunction with its preparation, are available for review at the following locations, during respective normal business hours:

San Bernardino County Transportation Authority, 1170 West Third Street, Second Floor San Bernardino, CA 92410-1715; Glen Avon Regional Library, 9244 Galena St., Jurupa Valley, CA 92509; Eastvale Branch Library, 7447 Scholar Way, Eastvale, CA 92580; Oult Family Community Library, 215 East "C" Street, Ontario, CA 91764-4111; Paul A. Biene Library, 12505 Cultural Center Drive, Rancho Cucamonga, CA 91739; Fontana Lewis Library & Technology Center, 8437 Sierra Avenue, Fontana, CA 92335-3952.

Additionally, the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may be downloaded at the following website: www.sbcta.com/15Corridor

WHERE YOU COME IN

Have the potential impacts been addressed? Do you have additional information that should be considered for the proposed project?

Do you have any comments about processing the project with a Mitigated Negative Declaration and the Initial Study/Environmental Assessment? Do you disagree with the findings of our study as set forth in the Proposed Mitigated Negative Declaration? Would you care to make any other comments on the project? Your comments will be a part of the public record. If you wish to make a comment, please submit your comments in writing no later than Friday, March 16, 2018, to:

James Sharkey, Senior Environmental Planner - California Department of Transportation - 484 West 4th Street, 8th Floor, MS-627, San Bernardino, California 92410-1715 or via email to: james.sharkey@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email.


WHERE AND WHEN?

The public hearing will be in an open house format on Thursday, March 1, 2018, from 5:00pm to 7:00pm at Edwards Intermediate School, in the Multipurpose Room, 6925 Edwards Avenue, Rancho Cucamonga, CA 91739.

Individuals who require special accommodations (American Sign Language or other linguistic interpreters, accessible seating, documentation in alternate formats, etc.) are requested to contact Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at least three business days prior to the date of the scheduled public hearing at (909) 864-6276 (voice) or use the California Relay Service, at (800) 363-6300 (TTY).

CONTACT

For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at (909) 864-6276. Thank you for your interest in this important transportation project.



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BLACK PANTHER PG-13 (11:30, 12:30, 1:30, 2:45, 3:45, 4:45), 6:00, 7:00, 8:00, 9:15, 10:15

EARLY MAN PG (11:10, 1:45, 4:15)

THE 15:17 TO PARIS PG-13 7:20, 9:50

FIFTY SHADES FREED R (11:20, 2:00, 4:30), 7:30, 10:00

LA BODA DE VALENTINA R (11:40, 2:20), 5:05, 7:40, 10:20

PETER RABBIT PG (11:50, 2:10, 4:40), 7:10, 9:40

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The Jurupa Hills soccer ladies gather for a photo after a game earlier this season.

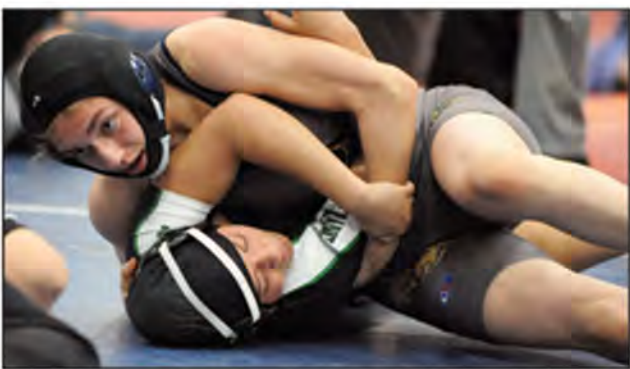
Jurupa Hills soccer ladies capture San Andreas League title for 2nd straight year

The Jurupa Hills High School soccer ladies have won the San Andreas League championship for the second straight year. The Spartans concluded the league season with a record of 8-1-1 (16-5-2 overall) by shutting out Rim of the World, 3-0, on Feb. 8. The biggest victory for the Spartans came when they pulled out an exciting 2-1 triumph over second-place Rialto on Feb. 6. Previous wins included a 4-1 decision over Indian Springs and a 4-0 conquest of Arroyo Valley. The Spartans began action in the CIF playoffs with a home game on Feb. 15.



CONTRIBUTED PHOTOS BY JERRY SOIFER

(Left photo) Etiwanda's Lauren Morales defeats Sophie Garcia of La Canada in a consolation round bout of the 170-pound division at the CIF Southern Section girls' wrestling championships on Feb. 10 at Roosevelt High School in Eastvale. Morales pinned Garcia at 3:40. She went on to take fifth place and qualify for the state championships. (Right photo) Bloomington's Amy Gathings defeats Sierra Rivera of Victor Valley for fifth place in the 137-pound division. Gathings scored a pin at 2:49. She qualified for the state tournament.



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PUBLIC NOTICE

Notice of Intent to Adopt a Mitigated Negative Declaration
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San Bernardino County Transportation Authority

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Eastvale Branch Library, 7447 Scholar Way, Eastvale, CA 92880; Oviatt Family Community Library, 215 East "C" Street, Ontario, CA 91764-4111; Paul A. Biene Library, 12505 Cultural Center Drive, Rancho Cucamonga, CA 91730; Fontana Lewis Library & Technology Center, 8437 Sierra Avenue, Fontana, CA 92335-3802.

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James Shankel, Senior Environmental Planner - California Department of Transportation - 464 West 4th Street, 8th Floor, MS-827, San Bernardino, California 92410-1715 or via email to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email.

WHERE AND WHEN?

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CONTACT

For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at 909.864.8276. Thank you for your interest in this important transportation project.

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MÚSICA El novato del año

“Este disco ha abierto un camino en mi carrera, no han parado de llegar nuevas oportunidades, nuevos países, nuevos retos”.

— Vicente García, cantante dominicano

El cantante y compositor Vicente García posa con sus tres premios por 'Mejor canción tropical', 'Mejor álbum de cantante y compositor' y 'Mejor artista nuevo' en la sala de prensa de los XVIII Premios Grammy Latinos el 16 de noviembre de 2017.

WINA PROMMER — EFE



Por la ruta de Juan Luis Guerra, con tres Grammys latinos, Vicente García integra lo mejor del bolero y la bachata, para hacer reggae con matices de jazz

Antonio Torres >> Agencia EFE

Aún celebrando los tres Grammy Latino y preparando un nuevo disco, el músico dominicano comienza una gira por Estados Unidos para dar a conocer su bachata y las mezclas que propone.

“Soy muy amigo de las fusiones y a toda la diversidad dominicana y caribeña le inyecto jazz, un poco de blues y música africana”, comenta. Para Vicente García (Santo Domingo, 1983) el año 2017 será difícil de olvidar, después de irrumper con gran fuerza en el panorama musical confirmando con los tres Grammy Latino que ganó el pasado mes de noviembre en Las Vegas: mejor artista nuevo, mejor álbum de cantautor por “A La Mar”, y mejor canción tropical por “Bachata en Kingston”.

Estrellitas en la frente

Gracias a estos premios, Vicente García ve el futuro con mayor optimismo. “Lo que uno piensa, lo que uno entiende y los futuros proyectos se ven más alcanzables”, explica el músico dominicano que considera que los

Grammy Latino le servirán para que su proyecto gane en fuerza y libertad. Un proyecto que le llevó por

México, Perú, Colombia, España y Costa Rica, y que ahora se mueve por Estados Unidos, donde Vicente García comienza una gira que le llevará a Nueva York, Los Angeles (27 de febrero) y Miami y poco después a las ciudades colombianas de Bogotá y Cali.

“Este disco ha abierto un camino en mi carrera, no han parado de llegar nuevas oportunidades, nuevos países, nuevos retos”, explica García.

En breve presentará su nuevo disco, que ya está terminando, “Trending Tropics”, que lleva el sello del productor puertorriqueño Eduardo Cabra (Vitante), del desaparecido dúo Calle 13.

“A La mar” ha sido el trabajo que ha consolidado a este músico dominicano, que en sus inicios le gustaba el punk, el funk y el soul, sin olvidar los ritmos de su país.

“Lo que más feliz me tiene es tener en mis hombros un disco honesto y sobretodo un disco que retrata la cultura mi país”, explica García.

Gracias a Juan Luis

Miembro del grupo Calor Urbano, decidió emprender su carrera en solitario gracias, en parte, a conocer a Juan Luis Guerra, el gran referente de la música dominicana. “Aprendí de él otras cosas como el valor y el respeto a la música, a la profesión, a la vocación, y la disciplina por la manera en que él ve su trabajo”, explica García.

Unos valores que García ha puesto en práctica en su carrera en solitario, mirando a las raíces y música de su pueblo a los que ha ido aportando nuevos ritmos.

“Soy muy amigo de las fusiones y a toda la diversidad dominicana y caribeña le inyecto jazz, un poco de blues y música africana... Me encanta, pero creo que es esencial buscar, si no en la música, en nuestra manera de decir las cosas, en nuestras costumbres y en nuestra identidad como tal”, apuntó.

Estas fusiones quedan patentes en “A La Mar”, un disco en el que la bachata es el punto de arranque pero que mezcla con el bolero, el pop, el son cubano o el reggae.

Precisamente, el reggae y la bachata se mezclan en el tema “Bachata en Kingston”, Grammy Latino a la mejor canción tropical. “El reggae tiene mucho que ver con la bachata, más que nada de la manera en que surgieron, desde el pueblo. También la figura del que canta, de resaltarse en el barrio”.

García presume de buscar en sus raíces. “Comencé a empaparme de mi cultura, a relacionarme con la gente del campo, a conocer mi país”, asegura.



ÚNASE A NUESTRO EVENTO COMUNITARIO ABIERTO AL PÚBLICO

PROYECTO DE CARRILES EXPRESOS DEL I-15

QUIÉN: Comisión de Transporte del Condado de Riverside, en colaboración con el Departamento de Transporte de California, el Departamento de Transporte del Condado de Riverside y la Ciudad de Corona.



QUÉ: Información será proporcionada sobre la próxima construcción de los Carriles Expresos de la carretera I-15 en formato de evento comunitario abierto al público. No se dará una presentación formal; los miembros del equipo del proyecto estarán disponibles para responder preguntas. Representantes de Caltrans, del Condado de Riverside y de la Ciudad de Corona también estarán disponibles para compartir información sobre otros proyectos que se avecinan, incluyendo el proyecto de ampliación de Temescal Canyon Road y proyectos de mejoras del intercambio Cajalco/I-15.

CUÁNDO: Miércoles, 28 de febrero del 2018, de 5:30 a 7:30 p.m.

DONDE: Eagle Glen Golf Club
1800 Eagle Glen Parkway, Corona, CA 92883




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SEGUNDO AVISO AL PÚBLICO

Aviso del propósito de adoptar una declaración negativa mitigada Aviso de disponibilidad de una evaluación ecológica • Anuncio de audiencia pública para el proyecto de la autopista interestatal 15



¿CUÁL ES EL PLAN?
La Autoridad de Transportación del Condado de San Bernardino (SBCTA, por sus siglas en inglés), en colaboración con el Departamento de Transporte de California (Caltrans, por sus siglas en inglés) propone construir carriles de peaje en ambas direcciones de la autopista interestatal 15 (I-15) desde aproximadamente 0.3 millas al sur de Santa Gallano Road en las ciudades de Eastvale y Jurupa Valley, milla fijada 49.8 en el condado de Riverside, hasta aproximadamente 1.2 millas al norte de Duncan Canyon Road en la milla fijada 12.2 en la ciudad de Fontana en el condado de San Bernardino. El proyecto propuesto de la autopista I-15 se extiende aproximadamente 14.7 millas de las millas fijadas 49.8-62.3 en el condado de Riverside hasta las millas 0.0-12.2 en el condado de San Bernardino y apropiará dos carriles de peaje en cada dirección entre la ruta estatal 60 (SR-60) y la ruta estatal 210 (SR-210), un carril de peaje en cada dirección entre Santa Gallano Road y SR-60, y un carril de peaje en cada dirección entre SR-210 y Duncan Canyon Road. El propósito del proyecto es de reducir el congestionamiento, aumentar la capacidad en los carriles de uso general, mejorar el tiempo de viaje en la autopista y mejorar la confiabilidad de viaje y opciones de movilidad sobre la vía.

Análisis de conformidad al nivel del proyecto demuestra que el proyecto se conformará al plan de implementación estatal, incluyendo análisis de impacto local con consulta interinstitucional para monedaje de carbono (CO) y partículas menores a 10 y 2.5 micrómetros (PM10 y PM2.5) requerida bajo ley 40 CFR 93.116 y 93.123. Este proyecto no es considerado un Proyecto de Interés en cuanto a partículas menores (PM10 y PM2.5) como definidos en 40 CFR 93.123(b)(1). No se preparó un análisis detallado en punto clave de la ley PM10 y PM2.5 porque los requisitos de la Ley para Aire Limpio y 40 CFR 93.116 se cumplen sin un análisis explícito. El proyecto completó coordinación interinstitucional vía la Asociación de Gobiernos del Sur de California (ASOGS, por sus siglas en inglés) y su Grupo Para Conformidad en Transporte (TCWG, por sus siglas en inglés) en una reunión el 24 de mayo de 2016. En esta reunión, el TCWG identificó que este proyecto no es un proyecto de preocupación a la calidad de aire (no es un PDAQ, por sus siglas en inglés). Tal decisión fue asentada por la Agencia de Protección Ambiental, Caltrans y la Administración Federal de Carreteras por correo electrónico después de la reunión del 26 de julio de 2016.

El proyecto proviene del Plan regional de transporte (RTP, por sus siglas en inglés) y el Programa de mejoras del transporte (TPP, por sus siglas en inglés). Se solicitan comentarios con respecto al análisis de conformidad a nivel del proyecto.

¿POR QUÉ ESTE AVISO?
Caltrans ha estudiado los efectos que este proyecto puede tener en el medio ambiente. Los estudios demuestran que no afectará significativamente la calidad del medio ambiente. El reporte que explica el por qué, es llamado un Estudio Inicial con Propósito de Adoptar una Declaración Negativa Mitigada/Evaluación Ambiental. Este aviso es para informar de la preparación del Estudio Inicial con Propósito de Adoptar una Declaración Negativa Mitigada/Evaluación Ambiental y la disponibilidad para leerlo.

Una audiencia pública se llevará a cabo para dar a los asistentes la oportunidad de hacer preguntas a los miembros del equipo del proyecto sobre características del diseño, el horario previsto para este proyecto incluyendo cuándo y cómo será construido y necesidades de propiedad para la vía pública, antes que el diseño final sea seleccionado.

¿QUÉ HAY DISPONIBLE?
Copias del Estudio Inicial con Propósito de Adoptar una Declaración Negativa Mitigada/Evaluación Ambiental aprobado, incluyendo los mapas del proyecto y los reportes técnicos cuyos resultados este estudio, están disponibles para que usted los revise en los siguientes sitios durante horas hábiles: San Bernardino County Transportation Authority, 1170 West Third Street, Second Floor San Bernardino, CA 92410-1715; Glen Avon Regional Library, 9244 Galena St., Jurupa Valley, CA 92509; Eastvale Branch Library, 7447 Scholar Way, Eastvale, CA 92880; Overt Family Community Library, 215 East "C" Street, Ontario, CA 91764-4111; Paul A. Biane Library, 12505 Cultural Center Drive, Rancho Cucamonga, CA 91739; Fontana Lewis Library & Technology Center, 8437 Sierra Avenue, Fontana, CA 92335-3892.

Adicionalmente, el Estudio Inicial con Propósito de Adoptar una Declaración Negativa Mitigada/Evaluación Ambiental se puede descargar del sitio web: www.sbgcta.com/15corridor

CÓMO USTED PUEDE PARTICIPAR
¿Se han tratado todos los posibles impactos? ¿Tiene usted información adicional que debe ser considerada para el proyecto? ¿Tiene algún comentario acerca de llevar a cabo este proyecto con una Declaración Negativa Mitigada y el Estudio Inicial/Evaluación Ambiental? ¿No está de acuerdo con los resultados del estudio como está estipulado en la Propuesta Declaración Negativa Mitigada? ¿Quiere hacer algún otro comentario sobre el proyecto? Sus comentarios serán parte del registro público. Si desea hacer un comentario, puede enviar sus comentarios por escrito a más tardar el viernes, 16 de marzo de 2018 a:

James Shankel, Senior Environmental Planner, California Department of Transportation
464 West 4th Street, 6th Floor, MS-427, San Bernardino, California 92410-1715 o por correo electrónico a: james.shankel@dot.ca.gov. Favor de poner en la línea de "asunto": "Interstate 15 Corridor Project"

Empezamos a aceptar comentarios el jueves, 15 de febrero de 2018. Comentarios sobre el Estudio Inicial con Propósito de Adoptar una Declaración Negativa Mitigada/Evaluación Ambiental, también se pueden entregar en persona durante la audiencia pública el 1 de marzo de 2018. Si no hay comentarios significativos, SBCTA, en cooperación con Caltrans, procederá con el diseño del proyecto.

¿CUÁNDO Y DÓNDE?
La audiencia pública será en formato de foro abierto y se realizará el jueves, 1 de marzo de 2018 de las 5:30 pm a 7:30 pm en Escondido Intermediate School, Multipurpose Room, 8025 Escondido Avenue, Rancho Cucamonga, CA 91739.

Para las personas que requieren adaptaciones especiales (American Sign Language, lenguaje de señas americano o intérprete de idiomas, asistentes auditivos especiales, documentación en formatos alternativos, etc.), pueden contactar Tim Wiggins, Jefe de Asesoría Legislativa y Públicos para SBCTA, a lo menos tres días antes de la fecha programada para la audiencia pública al (909) 864-8276 (voz) o pueden contactar a California Relay Service al (800) 963-6300 (TTY).

CONTACTO
Para más información acerca de este estudio, favor de contactar Tim Wiggins, Jefe de Asesoría Legislativa y Públicos para SBCTA, al (909) 864-8276. Gracias por su interés en este proyecto importante de transporte.

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PUBLIC NOTICE



Notice of Intent to Adopt a Mitigated Negative Declaration
Notice of Availability of an Environmental Assessment
Announcement of Public Hearing for Interstate 15 Corridor Project



WHAT'S BEING PLANNED?
The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans) proposes to construct tolled Express Lanes, in both directions of Interstate 15 (I-15) from approximately 0.3 miles south of Centu-Galliano Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The proposed I-15 Corridor Project extends for approximately 14.7 miles from Riverside County Post Miles 49.8-52.3 to San Bernardino County Post Miles 0.0-12.2 and would add two Express Lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Centu-Galliano Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. The purpose of the project is to reduce congestion, increase mainline capacity, improve travel time within the corridor, and improve trip reliability and mobility options along the corridor. The proposed project is currently expected to be open to traffic in 2024.

Project-level conformity analysis shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for carbon monoxide (CO) and particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met without an explicit hot-spot analysis. The project completed interagency coordination via Southern California Association of Governments' Transportation Conformity Working Group (TCWG), at a meeting on May 24, 2016. At this meeting, the TCWG identified that the proposed project is not a Project of Air Quality Concern (Not a POAQC). The United States Environmental Protection Agency, Caltrans, and the Federal Highway Administration concurrence in this regard was received via email after the July 26, 2016 meeting.

The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Comment is requested regarding the project-level conformity analysis.

WHY THIS AD?
Caltrans has studied the effects this project may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called an Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment. This notice is to tell you of the preparation of the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and of its availability for you to read.
A public hearing is being held to provide an opportunity to ask questions of Project Team members regarding design features, the tentative schedule for the proposed project including when and how the project will be constructed, and anticipated right of way requirements, before the final design is selected.

WHAT'S AVAILABLE?
Copies of the approved Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, including associated maps, as well as the technical studies relied upon in conjunction with its preparation, are available for review at the following locations, during respective normal business hours:

San Bernardino County Transportation Authority, 1170 West Third Street, Second Floor San Bernardino, CA 92410-1715; Glen Avon Regional Library, 9244 Galena St., Jurupa Valley, CA 91759; Eastvale Branch Library, 7447 Scholar Way, Eastvale, CA 91730; Ocotillo Family Community Library, 215 East "C" Street, Ontario, CA 91764-4111; Paul A. Boone Library, 12505 Cultural Center Drive, Rancho Cucamonga, CA 91739; Fontana Lewis Library & Technology Center, 8437 Sierra Avenue, Fontana, CA 92335-3892.

Additionally, the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may be downloaded at the following website: www.gosbcta.com/15corridor

WHERE YOU COME IN
Have the potential impacts been addressed? Do you have additional information that should be considered for the proposed project? Do you have any comments about processing the project with a Mitigated Negative Declaration and the Initial Study/Environmental Assessment? Do you disagree with the findings of our study as set forth in the Proposed Mitigated Negative Declaration? Would you care to make any other comments on the project? Your comments will be a part of the public record. If you wish to make a comment, please submit your comments in writing no later than Friday, March 16, 2018, to:

James Shankel, Senior Environmental Planner - California Department of Transportation
464 West 4th Street, 6th Floor, MS 827, San Bernardino, California 92410-1715 or via email
to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email.

The date we will begin accepting comments is Thursday, February 15, 2018. Comments regarding the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may also be submitted in person at the public hearing on March 1, 2018. If there are no major comments, SBCTA, in cooperation with Caltrans, will proceed with the project's design.

WHERE AND WHEN?
The public hearing will be in an open house format on **Thursday, March 1, 2018, from 5:30pm to 7:30pm** at Escondido Intermediate School, in the Multipurpose Room, 6925 Escondido Avenue, Rancho Cucamonga, CA 91739.

Individuals who require special accommodations (American Sign Language or other language interpreter, accessible seating, documentation in alternate formats, etc.) are requested to contact Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at least three business days prior to the date of the scheduled public hearing at (909) 884-8276 (voice) or use the California Relay Service, at (800) 383-6300 (TTY).

CONTACT
For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at (909) 884-8276. Thank you for your interest in this important transportation project.

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Combivent 18mcg/103mcg	600 ds	\$134.99
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Entocort 3mg	100	\$124.99
Januvia 100mg	84	\$254.99
Aggrenox 200mg/25mg	200	\$134.99
Abilify 5mg	84	\$134.99
Colcrys 0.6mg	100	\$104.99
Ventolin 90mcg	600 ds	\$74.99
Propecia 1mg	90	\$64.99
Vytorin 10mg/40mg	90	\$149.99
Xifaxan 550mg	100	\$164.99
Nexium 40mg	84	\$124.99
Asacol 800mg	300	\$244.99
Vesicare 5mg	100	\$139.99
Ranexa ER 1000mg	200	\$184.99
Cymbalta 60mg	100	\$59.99
Evista 60mg	84	\$125.99
Xarelto 20mg	84	\$459.99
Pentasa 500mg	400	\$324.99
Benicar 40mg	84	\$124.99
Multaq 400mg	180	\$589.99
Myrbetriq 50mg	90	\$359.99
Actigall 300mg	300	\$199.99
Bystolic 5mg	84	\$109.99
Eliquis 5mg	168	\$599.99
Pristiq 50mg	100	\$149.99
Spiriva Respimat 2.5mcg	180 ds	\$229.99

Drug Name	Qty (pills)	Price*
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Restasis 0.35 %	90 ds	\$219.99
Azilect 1mg	100	\$316.99
Janumet 50mg/1000mg	180	\$345.99
Lumigan 0.01%	9 ml	\$74.99
Flovent HFA 110mcg	360 ds	\$154.99
Onglyza 5mg	84	\$304.99
Tricor 145mg	90	\$134.99
Pradaxa 150mg	180	\$474.99
Synthroid 100mcg	90	\$54.99
QVAR 80mcg	400 ds	\$129.99
Finacea Gel 15%	90	\$129.99
Daliresp 50mcg	90	\$294.99
Uloric 40mg	90	\$169.99
Breo Ellipta 100mcg/25mcg	90 ds	\$394.99
Invokana 100mg	90	\$374.99
Jublia 10%	24 ml	\$484.99
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SECOND PUBLIC NOTICE

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Notice of Intent to Adopt a Mitigated Negative Declaration
Notice of Availability of an Environmental Assessment
Announcement of Public Hearing for Interstate 15 Corridor Project

WHAT'S BEING PLANNED?

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans) proposes to construct tolled Express Lanes, in both directions of Interstate 15 (I-15) from approximately 0.3 miles south of Santa Catalina Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The proposed I-15 Corridor Project extends for approximately 14.7 miles from Riverside County Post Mile 49.8 to San Bernardino County Post Mile 0.6-12.2 and would add two Express Lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Santa Catalina Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. The purpose of the project is to reduce congestion, increase mainline capacity, improve travel time within the corridor, and improve trip reliability and mobility options along the corridor. The proposed project is currently expected to be open to traffic in 2024.

Project-level conformity analysis shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for carbon monoxide (CO) and particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met without an explicit hot-spot analysis. The project completed interagency coordination via Southern California Association of Governments' Transportation Conformity Working Group (TCWG), at a meeting on May 24, 2016. At this meeting, the TCWG identified that the proposed project is not a Project of Air Quality Concern (Not a POAQC). The United States Environmental Protection Agency, Caltrans, and the Federal Highway Administration concurred in this regard was received via email after the July 26, 2016 meeting.

The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Comment is requested regarding the project-level conformity analysis.

WHY THIS AD?

Caltrans has studied the effects this project may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called an Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment. This notice is to tell you of the preparation of the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and of its availability for you to read.

A public hearing is being held to provide an opportunity to ask questions of Project Team members regarding design features, the tentative schedule for this proposed project including when and how the project will be constructed, and anticipated right of way requirements, before the final design is selected.

WHAT'S AVAILABLE?

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Additionally, the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may be downloaded at the following website: www.sosbcta.com/I15corridor

WHERE YOU COME IN

Have the potential impacts been addressed? Do you have additional information that should be considered for the proposed project? Do you have any comments about processing the project with a Mitigated Negative Declaration and the Initial Study/Environmental Assessment? Do you disagree with the findings of our study as set forth in the Proposed Mitigated Negative Declaration? Would you care to make any other comments on the project? Your comments will be a part of the public record. If you wish to make a comment, please submit your comments in writing no later than Friday, March 16, 2018, to:

James Shankel, Senior Environmental Planner - California Department of Transportation
464 West 4th Street, 6th Floor, MS-627, San Bernardino, California 92410-1715 or via email to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email.

The date we will begin accepting comments is Thursday, February 15, 2018. Comments regarding the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment may also be submitted in person at the public hearing on March 1, 2018. If there are no major comments, SBCTA, in cooperation with Caltrans, will proceed with the project's design.

WHERE AND WHEN?

The public hearing will be in an open house format on **Thursday, March 1, 2018, from 5:30pm to 7:30pm** at Edwanda Intermediate School, in the Multipurpose Room, 8925 Edwanda Avenue, Rancho Cucamonga, CA 91739.

Individuals who require special accommodations (American Sign Language or other lingual interpreter, accessible seating, documentation in alternate formats, etc.) are requested to contact Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at least three business days prior to the date of the scheduled public hearing at (909) 884-6276 (voice) or use the California Relay Service, at (800) 383-6300 (TTY).

CONTACT

For more information about this study, please contact Mr. Tim Watkins, SBCTA Chief of Legislative and Public Affairs, at (909) 884-6276. Thank you for your interest in this important transportation project.

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I-15 Corridor Project PA/ED

4-23
December 2018

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State Clearing House



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GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

March 19, 2018

James Shankel
California Department of Transportation, District 8
464 W. 4th Street, 6th Floor, MS -827
San Bernardino, CA 92401-1400

Subject: Interstate 15 Corridor Project
SCH#: 2018021044

Dear James Shankel:

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 March 16, 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.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-445-0613 FAX 1-916-558-3164 www.opr.ca.gov

Document Details Report State Clearinghouse Data Base

SCH# 2018021044
Project Title Interstate 15 Corridor Project
Lead Agency Caltrans #8

Type MND Mitigated Negative Declaration
Description Construct express lanes for approx 14.7 miles on I-15 from Riverside County PM 49.8-52.3 and from San Bernardino County PM 0.0-12.2. The project would add the following on I-15: 2 Express Lanes in each direction between SR 60 and SR 210, 1 Express lane in each direction between Cantu-Galleano Ranch Rd and SR 60, 1 Express lane in each direction between SR 210 and Duncan Canyon Rd. The project would also add 1 Auxiliary lane in each direction between SR 60 and I-10, and 1 auxiliary lane in the northbound direction between Fourth St and Foothill Blvd. In addition to the express lanes, the project includes reconstruction and/or modification of interchange ramps, local arterials, and structures that are necessary to accommodate the proposed improvements. Also, advance signage will be installed in relation to the project limits as required.

Lead Agency Contact

Name	James Shankel		
Agency	California Department of Transportation, District 8		
Phone	(909) 383-6379	Fax	
email			
Address	464 W. 4th Street, 6th Floor, MS -827		
City	San Bernardino	State	CA Zip 92401-1400

Project Location

County Riverside, San Bernardino
City Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga
Region
Lat / Long
Cross Streets I-15 from Cantu-Galleano Ranch Rd to Duncan Cnyn Rd
Parcel No.

Township	Range	Section	Base
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Proximity to:

Highways SR 60, I-10, SR 210
Airports Ontario Intl
Railways UPRR, BNSF
Waterways Day Creek Channel, Etiwanda Creek Channel
Schools mult
Land Use PLU: Existing highway/Z: NA; GPD: Freeway

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Landuse; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 6; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Native American Heritage Commission; Air Resources Board, Transportation Projects; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Bd., Region 6 (Victorville); Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Public Utilities Commission

Date Received 02/15/2018 **Start of Review** 02/15/2018 **End of Review** 03/16/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

4.3.3 Comments and Responses to Comments

Table 4-2 lists the agencies, organizations, and persons who provided comments on the Draft Environmental Document during the circulation period.

Table 4-2. List of Comments

Comment ID	Name of Commenter	Comment Type	Date of Comment
1	Calvin Lee	Email	Feb 17, 2018
2	Linda Grijalva	Email	Feb 19, 2018
3	Diane Braga	Email	Feb 28, 2018
4	Alison Denning	Email	Feb 28, 2018
5	Henry Fung	Email	March 1, 2018
6	Stella Williams	Email	March 1, 2018
7	Kristi Snyder	Email	March 1, 2018
8	Chuck Daniel	Email	March 1, 2018
9	Trenna Meins	Comment Card	March 1, 2018
10	Maitha Rosales	Comment Card	March 1, 2018
11	Tony Morales	Comment Card	March 1, 2018
12	Jack Licano	Comment Card	March 1, 2018
13	David Nalback	Comment Card	March 1, 2018
14A	Larry Meyer	Comment Card #1	March 1, 2018
14B	Larry Meyer	Comment Card #2	March 1, 2018
14C	Larry Meyer	Comment Card #3	March 1, 2018
15	Amy Isenberg	Comment Card	March 1, 2018
16	Christopher Quach	Comment Card	March 1, 2018
17	David Allred	Public Hearing Court Report	March 1, 2018
18	Robert Torres	Public Hearing Court Report	March 1, 2018
19	Jeff Johnson	Email	March 4, 2018
20	Michelle Schumacher	Email	March 4, 2018
21	Sharon Gagon	Email	March 5, 2018
22	Sandy Needs-Ramirez	Email	March 5, 2018
23	Dave Fernandez	Email	March 5, 2018
24	Kenneth Hunter	Email	March 5, 2018
25	Evie Anguiano	Email	March 5, 2018
26	Department of Toxic Substances Control	Letter	March 7, 2018
27	The Metropolitan Water District of Southern California	Letter	March 7, 2018
28	Mike Rossiter	Email	March 8, 2018
29	Native American Heritage Commission	Letter	March 12, 2018
30	Leopoldo V Alvarado	Email	March 14, 2018
31	County of San Bernardino	Letter	March 14, 2018
32	Southern California Gas Company	Letter	March 14, 2018
33	South Coast Air Quality Management District	Letter	March 15, 2018

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Table 4-2. List of Comments (Continued)

Comment ID	Name of Commenter	Comment Type	Date of Comment
34	United State Environmental Protection Agency	Letter	March 15, 2018
35	City of Rancho Cucamonga	Letter	March 15, 2018
36A	Lopez Letter of Petition	Emailed Letter	Email date: March 16, 2018 Letter date: March 3, 2018
36B	Lopez (Law Office) Letter	Letter	March 16, 2018
37	Tracy Capps	Email	March 16, 2018
38	Stephen Rogers	Email	March 16, 2018
39	Dan Titus, American Coalition for Sustainable Communities	Emailed Letter	March 16, 2018 Letter date: March 15, 2018
40	Elaine Gallegos	Emailed Card and Letter	March 19, 2018
41	Riverside County Transportation Commission	Letter	March 20, 2018

Because a large number of comment letters received had similar concerns, master responses were developed to address these concerns. The master responses were developed to address comprehensively these concerns and included the following topics:

1. Express Lanes versus High Occupancy Vehicles (HOV) lanes/carpool
2. Cost to users of Express Lanes
3. Type of the Environmental Document
4. Project construction noise impacts

Along with each Master Response included is a list of the comments that were addressed partially or entirely by the Master Response. Comments not covered completely by the master responses are provided with responses specifically related to the comment, although as applicable the master responses may be referenced to provide a response in part.

Master Response 1 (MR 1): Improvement in Traffic Operations with the Implementation of the Express Lanes.

As discussed in Chapter 1, Purpose and Need Section 1.4 of the Environmental Document, the project proposes the construction of Express Lanes to provide additional freeway capacity that would improve travel time and trip reliability and mobility within the I-15 corridor.

Section 2.1.9.3 of the Environmental Document Table 2-26, 2024 Freeway Mainline No Build and Build Alternatives LOS – AM and PM Peak Hours indicates that although there were locations within the GP lanes, where the Build Alternative LOS would have an unacceptable

LOS of D or below, nevertheless traffic conditions for the Build Alternative would still be shown to improve compared with the No Build Alternative conditions. Segments of the general-purpose lanes would have a lower volume than at the No Build condition, which results in improved traffic flow. Table 2-40 compares the Build Alternative LOS for GP lanes in the Build Alternative condition to the LOS for the No Build Alternative condition. The analysis shows that the project would improve conditions in the GP lanes in most segments of the study corridor.

The project improvements are also reflected in the overall travel speed improvement. Table 2-35 and Table 2-36 provide information on the forecast speed in 2024 for the AM Peak Hour and PM Peak Hour respectively. Without the project, speeds would be below 40 mph for most sections of the project limits during peak hours, and below 20 mph within other the worst-operating sections. (see Tables 2-49 and 2-50) The Build Alternative is shown to result in speed improvement in all segments. With the project, speeds in the GP lanes would be considerably higher, more than 50 mph for nearly the entire limits of the project area. In addition, drivers would have the option to use the Express Lanes and travel at potential speed higher than 60 mph. Dynamic pricing based on real-time traffic levels in the Express Lanes will be used to manage traffic in the Express lanes to ensure free flow speed of 45 mph or greater.

Master Response 2 (MR 2): Express Lanes Funding and Cost to Users.

Section 1.3 of the Environmental Document explains that SBCTA, in cooperation with Caltrans, performed a Preliminary Feasibility Study for I-15 in 2009, which was updated in 2010. The study, which evaluated the availability of viable funding sources and funding requirements for delivering the I-15 Corridor Project, found that due to funding limitations, build alternatives other than the Express Lanes would not be financially feasible. While Measure I funds will be used to fund the project partially, there are not sufficient funds available for the project from Measure I funds. The additional source of funding will be provided for the Express Lanes in the form of Toll Revenue Bonds that will be paid back by toll revenue generated from the Express Lanes. Toll revenue will also be used for maintenance and operation expenses of the Express Lanes. Excess revenue will be spent on improvements in the corridor. Per Assembly Bill 914, these excess revenue expenditures will be described in an excess revenue expenditure plan that will be developed prior to completion of construction by the Board of the San Bernardino County Transportation Commission in consultation with Caltrans.

The tolls on the I-15 will apply only to the new Express Lanes not to the existing (general purpose) lanes. Drivers will be able to choose to use the Express Lanes and pay the toll, or remain in the general-purpose lanes and not pay the toll. Measure COM-1, included in Section 2.1.5.4 Avoidance, Minimization, and/or Mitigation Measures of this Environmental Document, will be implemented to assist low-income households in utilizing the proposed Express Lanes. According to this measure, SBCTA will create a Low-Income Equity Program, which will include policies such as waiving account maintenance fees, allowing the use of cash to open and replenish toll accounts, and/or implementing video license plate recognition as an alternative to toll-collection technology, and allowing the collection of tolls without the need to purchase a transponder. In addition, the project is anticipated to allow High Occupancy Vehicles (HOV) with three or more occupants (HOV 3+) to use the Express Lanes for a discounted rate. The decision to allow free or discounted HOV 3+ users will be confirmed by SBCTA prior to the award of the Design-Build contract.

Master Response 3 (MR 3): The Level of the Environmental Document.

Pursuant to Public Resource Code (PRC) §21080(c), PRC § 21082.2 and 14 California Code of Regulations (C.C.R) §15070, a Mitigated Negative Declaration is the appropriate document when: “The initial study identifies potentially significant effects, but: (1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment”. The analysis of the potential project impacts was prepared based on the technical studies conducted for the project according to Caltrans Standard Environmental Reference guidance and requirements. A list of these studies is included in the Environmental Document Appendix E List of Technical Studies. According to the studies conducted for the project and used in the preparation of the CEQA evaluation provided in Chapter 3 of this Environmental Document, it is not anticipated that the project, as designed and with the implementation of the identified avoidance, minimization, and mitigation measures, would result in significant and unavoidable impacts; therefore, an EIR is not required.

Master Response 4 (MR 4): Project Construction Noise Impacts.

The SBCTA Design-Builder will construct the sound walls as an early construction activity, which will further reduce the noise impacts associated with the construction activities. The FED includes Abatement Measure NOI-1 which states: “The Design-Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.”

As indicated in the Noise Section 2.2.7.3 Environmental Consequences (Temporary) of the Environmental Document, the project is required to comply with Caltrans Standard Specification (SS) 14-8.02. SS 14-8.02 requires “the project not to exceed 86 dBA Lmax at a distance of 50 feet from the job site between the hours of 9 P.M. to 6 A.M.” The Environmental Document has been revised to indicate that the project is required to include noise reducing features to achieve compliance with the SS noted above as discussed in Section 2.2.7.3 Environmental Consequences (Temporary), which states: “the contractor will, as practicable and applicable implement additional noise reducing measures in the vicinity of noise sensitive receptors, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work and installing acoustic barriers around stationary construction noise sources, in order to achieve compliance with contract standard special provisions.” These types of additional noise reduction measures will be applied in areas where noise sensitive receptors are located and where it is determined that construction noise would exceed the 86 dBA Lmax

standard. These measures will help reduce the predicted construction noise levels and allow the project to comply with the requirements of SS 14-8.02.

In addition, the project will not include pile driving methods anywhere in the project construction where noise sensitive receptors are present, with the exception of the Cherry Avenue and Victoria Street under-crossings. Cast-In-Drilled Hole (CIDH) piles will be used for this project. The CIDH piles use construction methods that minimize construction related noise and vibration compared to driven piles. Where CIDH cannot be used, Pile driving will not occur between the hours of 9 PM and 6 AM to comply with SS 14-8.02.

Comment 1: Calvin Lee	
<p>From: Calvin Lee [mailto:calvinyleepharmd@gmail.com] Sent: Saturday, February 17, 2018 7:59 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Interstate 15 Corridor Project</p> <p>Hello James,</p> <p>1-1 I've been a 10 year resident of Rancho Cucamonga within a 1/2 mile of the interstate 15 freeway. With the expansion of the interstate 10 along with the 15 freeway, this will negatively impact the residents from: noise, vibrations, dust, air pollution hazards, the use of non-renewable aggregates, the loss of natural habitats and green space and increase in traffic. Please STOP the expansion.</p> <p>Regards, Calvin Y. Lee, Pharm.D.</p>	<p>Thank you for your comment.</p> <p>1-1 As described in Air Quality Section 2.2.6, and Noise Section 2.2.7, the analysis indicates that the project impacts are anticipated to be temporary and minimal with the required compliance with air quality and noise standard measures and practices.</p> <p>Caltrans policy (as outlined in the Traffic Noise Analysis Protocol [Protocol]) requires the preparation of a Noise Study Report (NSR) if the project is considered a Type 1 project, which is the case of the I-15 Tolle Express Lanes Project since it would add additional through-traffic lanes(s). The preparation of the NSR requires analysis of land uses along the project alignment with the emphasis on land uses which would benefit from a reduced noise level. (generally, areas where people are present for extended periods of time (such as backyards or playgrounds). The NSR modeled and analyzed 306 modeled receivers along the alignment, of which 289 were noise sensitive.</p> <p>Within the City of Rancho Cucamonga, the NSR identified three noise barriers (S-344, S-353, and S-411) which were found to be feasible (providing 5 dB noise reduction at modeled noise receivers and 7 dB noise reduction at, at least 1 modeled receiver). The feasible noise barriers were analyzed in the Noise Abatement Decision Report (NADR) which found that all four of these walls were reasonable (meaning the reasonableness allowance, calculated in the NSR, was more than the cost to construct the barrier). Therefore, all four of these barriers were included as abatement as part of the project</p>

Comment 1: Calvin Lee	<p>as indicated Chapter 2.2.7.4 of the Final Environmental Document (FED).</p> <p>Based on comments provided by residents located along the alignment, design changes to Barrier S-344, Barrier S-353, and Barrier S-396 were analyzed in addenda to the NSR and NADR. The results of these addenda were included in the ED. Based on comments provided during the comment period, and included in Figure 2-50 and Table 2-84 of the FED, Barrier S-344 will be extended approximately 1,030 feet to provide shielding for the Sacred Heart Parish School.</p> <p>Similarly, Barriers S-353 and S-396 were both modified per comments. As shown in Figure 2-50 and Table 2-85 of the FED, Barrier S-353 would be reduced by 300 feet in length. The barrier reduction was necessitated by a comment provided by the City of Rancho Cucamonga requesting to provide visibility to the local business (Bass Pro Shop). The barrier length reduction (Table 2-84 of the FED) would result in noise reduction decreasing by 1 dB (noise reduction at modeled receiver M-103 would decrease from 7 dB to 6 dB) at one benefited receptor (a benefited receptor is defined as a receptor that receives 5 dB or more of noise reduction from abatement).</p> <p>Barrier S-396 as shown in Figure 2-50 and Table 2-87 of the FED, would be reduced by 200 feet in length. The barrier reduction was necessitated by a comment provided by the owner of the retail building which includes Starbucks. The barrier length reduction (Table 2-86 of the FED) would result in noise reduction decreasing by 1 dB (noise reduction at modeled receiver M-223 would decrease from 5 dB to 4 dB) at one benefited receptor (a</p>
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Comment 1: Calvin Lee	
	<p>benefited receptor is defined as a receptor that receives 5 dB or more of noise reduction from abatement). The receiver M-223 is representative of the outdoor seating area of the Starbucks. None of the residential receivers (M-225 through M-234) would be affected by the barrier reduction.</p> <p>CIDH piles would be used in place of vibration intensive impact pile driving in bridge construction within the project limits starting at Foothill Boulevard and extending to the northern limit of the project with the exception of Victoria Street Undercrossing, and the Cherry Avenue Undercrossing due to unsuitable soil conditions. Vibration levels identified in the FTA Noise and Vibration manual identify that (caisson) drills, which are similar to auger drills, would produce 0.089 Peak Particle Velocity (PPV) at a distance of 25 feet, which would be below the level of damage for buildings which are considered extremely susceptible to vibration damage (0.12 PPV). As any land uses susceptible to vibration impacts would be more than 25 feet from construction equipment, vibration would not result in an impact. (FTA 2018)</p> <p>In general, literature on the subject shows that only blasting, pile driving, and pavement breaking have documented examples of potential damage to buildings (American Association of State Highway and Transportation Officials [AASHTO] 1990). For pile driving and pavement breaking, the potential for damage from vibration is at locations in relatively close proximity to the activity. The closest structure (located approximately 350 feet) would be located at the Cherry</p>

Comment 1: Calvin Lee

Avenue undercrossing. Vibration Peak Particle Velocity (PPV) would reduce at a rate of $PPV_{ref} \times (25/D)^N \times (E_{equip}/E_{ref})^{0.5}$, where:

PPV_{ref} = 0.65 inches/sec at a reference distance of 25 feet,

D = distance from the pile driver,

N = 1.1 is the value related to attenuation of vibration throughout the ground,

E_{ref} = 36,000 foot-lb (rated energy of reference pile driver),

E_{equip} = rated energy of impact pile driver in ft-lbs (assumed same as reference). Vibration levels would be on the order of 0.03 PPV. (Caltrans 2013)

As such vibration from construction would be well below the 0.12 PPV damage potential for extremely vibration susceptible buildings referenced in the FTA noise and vibration manual. Therefore, no vibration study was necessary and the CEQA vibration section will be updated to reflect this information.

If changes occur during the Design Build phase requiring the use of pile driving instead of CIDH vibration in the areas as described above, additional environmental review would be required to confirm that vibration impacts would not occur.

As discussed in Chapter 3, operational vibration will be the same as the no build condition. The project would not include an increase in heavy truck percentage therefore operational vibration would not change.

Comment 1: Calvin Lee	
	<p>Air pollution and dust related to all construction activities, including the extraction of non-renewable aggregate materials, have been fully evaluated and disclosed in the Environmental Document. The air quality analysis presented in the Air Quality Section 2.2.6 of this Environmental Document demonstrates that all air quality impacts would be less than significant with implementation of air quality avoidance/minimization measures identified in Section 2.2.6.4, as well as required compliance provisions related to air quality identified in Section 1.6 of this Environmental Document. Examples of these measures and compliances include the use of all engines or portable engine-driven equipment to be required to obtain permits will obtain either a CARB Portable Equipment Registration or a permit from SCAQMD, the use of all diesel fueled construction equipment, whether stationary or mobile, will comply with the latest applicable regulations promulgated by the California Air Resources Board. Furthermore, as a standard measure, discussed in Chapter 1, under subheading “Other Project Provisions”, all vehicles and equipment will meet appropriate model year EPA/NHTSA/CARB standards related to fuel efficiency and emissions.</p> <p>Localized particulate matter (PM) and carbon monoxide (CO) analyses conducted for this project concluded that impacts to local air quality would be less than significant. The local CO and PM analyses are provided in Sections 2.2.6.3 under Localized Carbon Monoxide Hot-Spot Evaluation and Localized PM2.5 and PM10 Hot-Spot Evaluation respectively. In addition, the MSAT emissions</p>

Comment 1: Calvin Lee

analysis provided in Section 2.2.6.3 under Mobile Source Air Toxics, shows that all MSAT emissions at horizon 2045 would be less than current baseline levels.

Regarding the use of non-renewable aggregates, concrete rubble will be recycled on site to the maximum extent practicable, either as aggregate for a pavement base layer, or as fill to minimize import of borrow material. As described in Project Description Section 1.6 of the Environmental Document, this project is planned to be constructed mostly within the existing right of way limits. Out of the project limits, approximately 8.7 miles of the 14.7 miles widening occurs within the previously disturbed median area of the freeway. Analysis provided in Biological Environment Section 2.3.1.2 shows that the project would result in nominal loss of natural habitats because the project will retain and protect in place, or replace the existing vegetation to the extent possible. The project will include a weed abatement plan to minimize the spread of invasive species during construction activities as described in measure IS-1 in Section 2.3 Invasive Species. There is no green space within the project limits; therefore, the project will not have an impact on green space.

Traffic and Transportation Section 2.1.9.3 indicates that the project is planned to address the existing and future traffic demand forecasted through the horizon year of 2045. The analysis shows that the travel demand will continue to grow within the project limits. The project improvements will attract additional traffic to the I-15 project limits; however, Table 2-26 and Table 2-40 show that the traffic volume within the GP lanes will be less

Comment 1: Calvin Lee	
	<p>with the construction of the Express Lanes when compared with the No Build Alternative. In addition, the analysis shows that with the construction of the Express Lanes, the forecasted speed will experience improvement during the morning and evening peak hour periods within the project limits. Even though there are GP lanes segments that will continue to perform at an unacceptable LOS of E or below, it is forecasted that there will be an overall improvement in traffic density within the lanes, and LOS improvement within several segments of the project when compared with the No Build conditions.</p> <ul style="list-style-type: none">• FTA. 20062018. <i>Transit Noise and Vibration Impact Assessment. Final</i>. FTA-VA-90-1003-06. Washington, DC. Prepared for Federal Transit Administration Washington DC.• Caltrans. 2013. <i>Transportation and Construction Vibration Guidance Manual. Final</i>. CT-HWANP-RT-13-069.25.3. Sacramento CA. Prepared for California Department of Transportation Sacramento CA.

Comment 2: Linda Grijalva

From: Linda G [mailto:a00linda_g@yahoo.com]
 Sent: Monday, February 19, 2018 7:52 AM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Subject: I 15 project

2-1 [No matter how much you widen the 15 it is no good because traffic will only increase and when there is a major accident it comes to a complete stop. I know because I have been driving this route for over 20 years.

2-2 [What about when a fire closes the pass?

This also needs to be addressed a simple solution would be for the 14 and 15 to be connected by a freeway but some genius decided to widen the 138 which made it 3x's more dangerous to drive. I know because I live in Phelan and have seen how reckless drivers have become because they are in a hurry especially during the early hours and they are not locals.

The more lanes you put the more reckless drivers become. When the truck lane was put in for the semis it was fine but now I have seen cars use that lane as a passing lane and cut off other cars as well as semis.

2-3 [What you don't understand is that the majority of the traffic passing through is those either going to Vegas or using the 15 and 138 as a short cut to the rest of California.

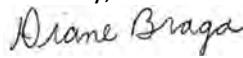
You will never keep up with the traffic flow because more homes will be built near the freeway as soon as the project is completed.

Linda Grijalva

Thank you for your comments.

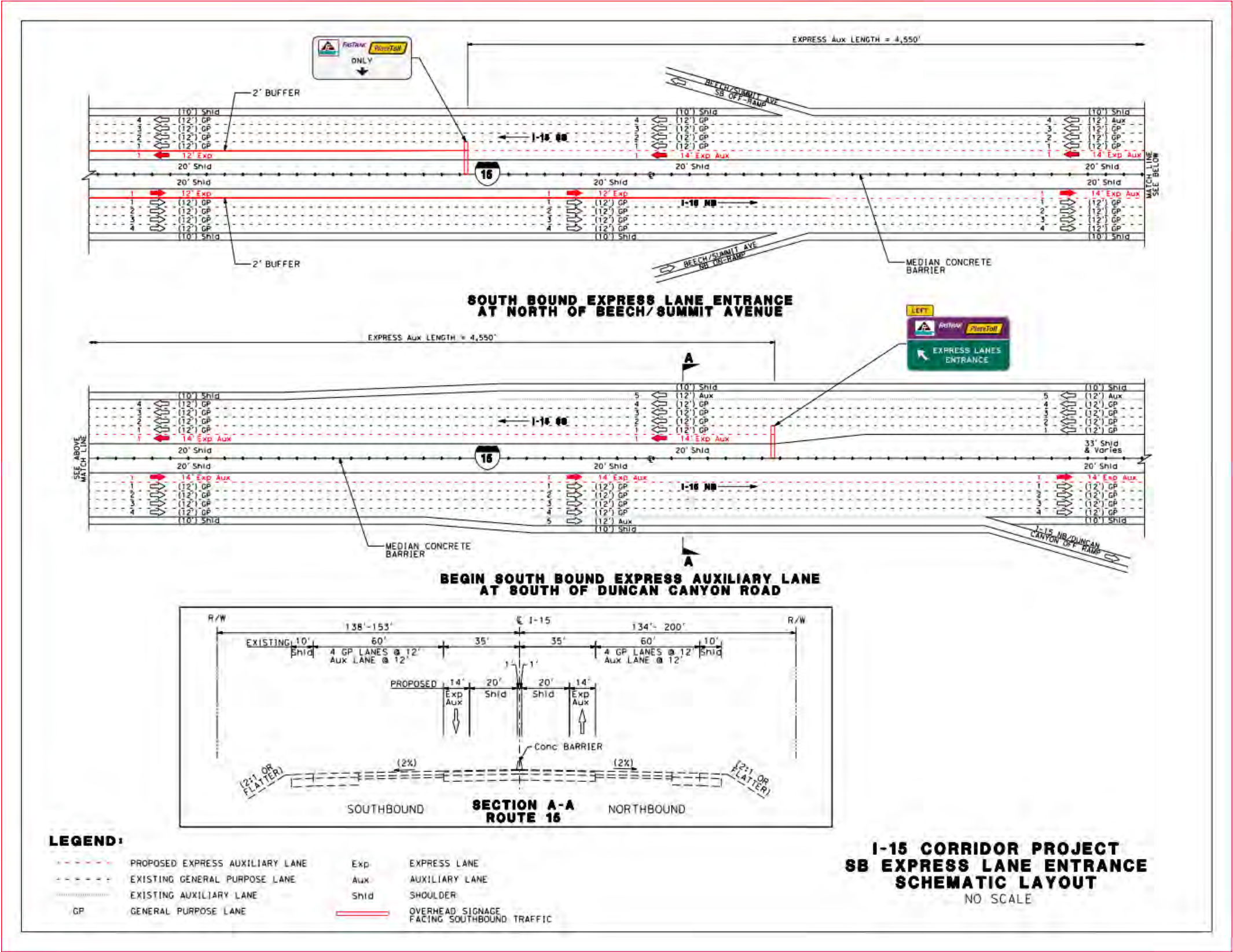
2-1 It is anticipated that traffic demand will continue to increase within the project limits. With the increase in demand and lack of sufficient capacity, traffic conditions would continue to deteriorate. Traffic and Transportation Section 2.1.9.3 indicates that the project is planned to address the existing and future traffic demand forecasted through the horizon year of 2045. The analysis shows that the travel demand will continue to grow within the project limits. The project improvements will attract additional traffic to the I-15 project limits; however, Table 2-26 and Table 2-40 show that the traffic volume within the GP lanes will be less with the construction of the Express Lanes when compared with the No Build Alternative. As a result, the analysis shows that with the construction of the Express Lanes, the forecasted speed will experience improvement during the morning and evening peak hour periods within the project limits. Even though there are segments within the project limits that will continue to perform at an unacceptable Level of Service of E or below, there will be an overall improvement in traffic density and several segments are forecasted to have LOS improvement when compared with the No Build conditions. Although this is not a safety project the operational improvement is anticipated to reduce the potential for certain types of accidents associated with congestion.

Comment 2: Linda Grijalva	
	<p>2-2 The project limits do not include the I-15 through the Cajon Pass. The Cajon Pass is approximately 12 miles north of the project limits.</p> <p>2-3 The I-15 CP is intended to address anticipated long-term traffic demand. As noted in Need Section 1.4.2, and the traffic analysis provided in the Traffic and Transportation Section 2.1.9, the project is planned to address the existing and future traffic demand forecasted through the horizon year of 2045.</p> <p>As discussed in the first-cut screening in Section 2.1.3.1 Growth, the proposed project would not influence growth because it would not directly result in any changes to land use or encourage changes in population density. A majority of the area surrounding the corridor is built-out although there are undeveloped areas within the project area, particularly surrounding the I-15/I-210 interchange that could potentially be developed; however, the existing SCE transmission corridor, which parallels I-15, limits development potential in this area. The project would not change how these areas are accessed but rather would improve travel times to these areas. The I-15 corridor is experiencing considerable performance problems due to heavy traffic and a lack of other reliable travel options. The proposed project is designed to alleviate existing patterns of congestion and improve mobility by reducing travel time.</p>

Comment 3: Diane Braga	
<p>February 28, 2018 James Shankel, Senior Environmental Planner-Calif. Dept. of Transportation 464 W 4th st, 6th Floor, MS-827 San Bernardino CA 92410-1715</p> <p>'Notice of Intent to Adopt a Mitigated Negative Declaration Notice of Availability of an Environmental Assessment Announcement of Public Hearing of Interstate 15 Corridor Project'</p> <p>3-1 [The Public Notice placed in the newspaper as stated above, is very deceiving at first glance. If I hadn't read the entire Notice, I would not have known the reason for the hearing. Maybe you don't want the public to know what you are intending to do.</p> <p>3-2 [My taxes already paid for the Interstate. I don't feel that installing a Toll Road, to pay again for a freeway that I have already paid for, is right.</p> <p>3-3 [I have been on one of those roads that turn into toll roads and if those toll roads are not properly marked, you can start driving on them and several weeks later receive a ticket. That happened to me a few years ago.</p> <p>3-4 [I believe a High Density lane is good, but not a Toll Road. It is wrong. And, where is that money going?</p> <p>Thank you for reading my comments.</p> <p>Sincerely,  Diane Braga 6878 Billings Pl. Rancho Cucamonga CA 91701</p>	<p>Thank you for your comments.</p> <p>3-1 It is the intent of SBCTA and Caltrans to always be informative and transparent in all their actions involving public facilities, planned projects, and other activities involving public infrastructure. The public notice provides the purpose of the notice in its heading. The notice also provides information on the public hearing, including the opportunity to be involved and provide comments regarding concerns that should be considered in the proposed project development. The notice also identifies locations where the Environmental Document is available for review.</p> <p>3-2 The project will be funded mostly using toll fees. Several others have expressed similar concerns regarding project funding and cost to users which is discussed in more detail in Master Response MR 2 Express Lanes Cost to Users.</p> <p>3-3 As per California Manual on Uniform Traffic Control Devices standards, this project is proposing adequate new signage to provide drivers with the information needed ahead of the beginning of the Express Lanes facility or intermediate access points to/from the Express Lanes facility. This signage will help the drivers to decide to either enter the Express Lanes facility or to continue driving on the GP lanes. In addition, a transition will be provided by new Express Auxiliary Lanes of approximately a mile in length each, which will provide adequate length to decide whether to merge into the Express Lanes or return to the GP lanes. Please see Figure 4-1, below, (Southbound Express Lanes Entrance) for information on the delineation of the Express Lanes ingress points.</p>

Comment 3: Diane Braga	
	3-4 Express Lanes are the only financially feasible alternative that meet the project purpose and need. Please See Master Responses MR 1 Express Lanes and High Occupancy Vehicles (HOV) lanes/carpool and MR 2 Express Lanes Cost to Users.

Figure 4-1. Southbound Express Lanes Entrance



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Comment 4: Alison Denning

From: Alison [mailto:alisonldenning@aol.com]
 Sent: Wednesday, February 28, 2018 7:54 PM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Subject: Public Comment on 1/15 Corridor Project

Dear Mr. Shankel,

I have been very frustrated driving the area of the 1/15 Corridor Project. Traffic is often at a standstill. I mention this because I do understand a need to find a solution to this problem.

4-1 [However, I am not in favor of toll lanes. This seems undemocratic. Everyone contributes taxes to pay for the roads and they should have equal access to all lanes. It should not be based on ability to pay the tolls.

I am in favor of express lanes where the requirement is the number of passengers in the vehicle.

Respectfully, Alison Denning

Sent from Mail for Windows 10

Thank you for your comment.

4-1 Please see Master Response 2, on page 4-31 above, regarding Express Lanes Funding and Cost to Users. As noted at the beginning of this section, master responses were prepared for those comments that were provided multiple times. As described in Purpose and Need Section 1.4 of the Environmental Document, according to SBCTA tolling policies, it is anticipated that vehicles with three or more occupants will be allowed to use the Express Lanes for a discounted rate. A final decision regarding the toll rate for vehicles with three or more will be adopted prior to the award of the Design-Build contract for this project. The Express Lanes would also support potential future express bus service.

Comment 5: Henry Fung	
<p>From: Henry Fung [mailto:calwatch@gmail.com] Sent: Thursday, March 1, 2018 12:38 AM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Interstate 15 Corridor Project</p>	<p>Thank you for your comments.</p> <p>5-1 Technical Studies and analysis indicated that an IS/EA is the appropriate document for the project. For a response to your comment and similar comments from the public, please also see Master Response MR 3.</p> <p>As noted in Growth Section 2.1.3 of the Environmental Document, growth forecasts developed for the SCAG's 2016-2040 RTP/SCS indicates that population and traffic demand will continue to grow in Riverside and San Bernardino Counties. Tables 2-26, and 2-40 show that traffic demand will increase with the No-Build conditions in the years 2024 and 2045 respectively. The analysis in the Traffic and Transportation Section 2.1.9.3, indicates that the project addresses the existing and future traffic demand forecasted through the horizon year of 2045. The proposed Express Lanes are projected to alleviate existing patterns of congestion, and improve mobility.</p> <p>The proposed project would not influence growth because the project would not directly result in any changes to land use or encourage changes in population density. Growth in the region is anticipated to occur whether or not the project is constructed. While the project would result in some improvements in accessibility due to reductions in travel times, these improvements would not influence the attractiveness of some areas to</p>
<p>5-1 [This document should have been an EIR, not a mitigated negative declaration. In particular the assertion that this improvement would not be growth inducing is incorrect and unsupported (CEQA checklist). Induced demand caused by the additional capacity will occur and will spur development in the Victor Valley areas.</p>	
<p>5-2 [Transit service was unilaterally deemed unviable when there are significant existing transit hubs along the corridor, such as the Rancho Cucamonga Metrolink Station, Victor Valley Mall, Victorville Transit Center, Ontario Mills, Ontario Airport, and the Corona Metrolink station. Express bus service along the corridor should have been analyzed. TSM/TDM should have been fully developed into an alternative, as well as a traditional single HOV lane rather than dual express lanes. In addition, Direct Access Ramps as has been greatly successful in San Diego County's section of I-15 should have been considered.</p>	
<p>5-3 [How does this project support the goals of SB 375 and reduce climate change? More individuals will move to the Victor Valley using more energy in heating and cooling.</p>	
<p>5-4 [Impact of soundwalls to mountain views was not addressed.</p>	
<p>5-5 [Why was there no notice of preparation of the study? I reserve the right to make further comments as appropriate. Sincerely, Henry Fung</p>	

Comment 5: Henry Fung	
	<p>development over others. Furthermore, as discussed in the first-cut screening in Section 2.1.3.1 Growth, the majority of the area surrounding the corridor is built-out although there are undeveloped areas within the project area, particularly surrounding the I-15/I-210 interchange that could potentially be developed; however, the existing SCE transmission corridor, which parallels I-15, limits development potential in this area. The project would not change how these areas are accessed but rather would improve travel times to these areas. The I-15 corridor is experiencing considerable performance problems due to heavy traffic and a lack of other reliable travel options. The proposed project is designed to alleviate existing patterns of congestion and improve mobility by reducing travel time.</p> <p>5-2 Coordination with representatives of the Public Transit providers including Riverside Transit Agency (Rohan Kuruppu, Director of Planning), OmniTrans (Jeremiah Bryant, Planning and Scheduling Manager) and Victor Valley Transit Authority (Nancy Goff, Deputy Executive Director) was completed as part of the preparation of the Environmental Document for the project. Express bus service utilizing the I-15 within the project limits was deemed unviable at this time by the transit agencies serving the project area. RTA indicated that bus service utilizing the I-15 freeway including the project limits may be considered in the future. The Express Lanes proposed with this project would not preclude future use of express</p>

Comment 5: Henry Fung	
	<p>bus service. Buses would be allowed to use the Express Lanes without paying a toll. SBCTA, as the responsible agency for regional transportation planning, is committed to furthering a multimodal transportation system and the continuous coordination with local jurisdictions and transit providers for planning of future transit routes and facilities, including buses.</p> <p>Additional Transportation System Management (TSM) and Transportation Demand Management (TDM) strategies are incorporated in the project as described in Project Description Section 1.6. TDM measures are focused on increasing vehicle occupancy by encouraging carpooling. This includes carpooling programs already being implemented by SBCTA and RCTC, and the implementation of reduced fees for high occupancy vehicles using the Express Lanes. Express Lanes are the only financially feasible alternative that meet the project purpose and need. For additional information on the proposed Express Lanes as the only project's Build Alternative, please see Master Response MR 2 on Express Lanes Funding and Cost to Users.</p> <p>Even though TSM and TDM measures are already implemented or will be implemented by the project, these measures alone could not improve capacity and meet demand without increasing the number of through lanes.</p> <p>5-3 See Section 3.2 of the Environmental Document for discussion on Climate Change. SB 375 requires that the RTP for a region include a Sustainable</p>

Comment 5: Henry Fung

Communities Strategy (SCS), which outlines growth strategies that better integrate land use and transportation planning and help reduce the State's GHG emissions from cars and light trucks [(California Government Code §65080 (b)(2)(B))]. For the SCAG region, the California Air Resources Board (CARB) has set per-capita GHG reduction targets for 2020 and 2035 that the SCAG 2016-2040 RTP/SCS has been developed to meet. As discussed in Section 3.2 of the Environmental Document, the project is identified in the SCAG 2016-2040 (RTP/SCS) under project number 4122006. The SCAG 2016–2040 RTP/SCS includes several major initiatives that the project would either directly implement, or would support, including the RTP/SCS initiatives to improve highway and arterial capacity through the implementation of Express Lanes, demand management by encouraging modes other than single-occupancy vehicles, dynamic corridor congestion management, and the SCAG Congestion Management Program (CMP). Each of these initiatives would contribute to RTP/SCS implementation, the GHG reduction target of which is 18 percent per capita relative to a 2005 baseline by 2035. This target surpasses the target developed for the SCAG region by CARB as part of SB 375. Caltrans has used the best available information based on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. It is Caltrans' determination that in the

Comment 5: Henry Fung	
	<p>absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. In addition to the project complying with existing rules regarding the control of pollutants, the project would implement measures to reduce potential greenhouse gas effects as outlined in the Climate Change Section 3.2.</p> <p>5-4 The planned noise barriers in the form of sound walls were identified after the protocol survey conducted in April 2018. Table 1-11 in Section 1.6 Project Description was updated in the Final Environmental Document to identify the approved noise barriers. Visual/Aesthetics, Environmental Consequences Section 2.1.10.4 has been revised within the analyzed Key Views to provide additional analysis specific to the sound walls' impacts on mountain views. Overall, the revised analysis indicates that the proposed sound walls would not obstruct views of the mountains for the majority of viewers. At Key View 1 and Key View 2, sound walls are not expected to block existing mountain views and, therefore, the visual resource impact assessment levels at these Key Views remain the same. At Key View 3, near Etiwanda Avenue, the sound walls could obstruct views of the mountains for some local residents and drivers along I-15. This obstruction is anticipated to be</p>

Comment 5: Henry Fung	
	<p>either partial, or limited to a small number of residents. Therefore, at Key View 3 the sound walls would increase the level of visual resource change to moderate. A moderate resource change with a high viewer response increases the visual impact at Key View 3 to moderate-high from moderate.</p> <p>In addition, Section 2.1.10.5 Avoidance, Minimization and/or Mitigation Measures was revised to incorporate Measure VA-10, which requires vine planting with irrigation on one or both sides of the sound walls to soften the hard visual appearance of the walls and to deter graffiti.</p> <p>5-5 The Environmental Document prepared for the project is an <i>Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment</i>. Per CEQA Section 15082, a Notice of Preparation is required for the preparation of an EIR. However, as required by subdivision (c) of CEQA Section 21157.1, a notice was provided to the public for the availability of the Environmental Document prepared for the project, the intent to adopt the proposed Mitigated Negative Declaration, and the opportunity to review and comment on the Environmental Document, including attending a Public Hearing held during the review period. Public Participation Section 4.3 of the Environmental Document provides details on this process, as well as, other public outreach activities conducted for the project prior to and at the start of the Environmental Document phase.</p>

Comment 6: Stella Williams	
<p>From: Williams, Stella [mailto:Stella.Williams@cit.com] Sent: Thursday, March 1, 2018 8:44 AM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Objection to Toll Lanes 15 Freeway</p> <p>6-1 [I am not in favor of toll lanes. The 91 freeway is proof that they do not work. The toll is very very expensive; therefore the lanes are practically empty. I have driven on the 91 freeway heading East at 3pm and I can tell you the traffic does not move from Anaheim to the 71 freeway which is where I exit. What you can address is the big rig traffic and possible lanes only for their use. I can't afford a toll to use the freeway for which we are being heavily taxed already in our gas price and now you want us to pay to drive on the road.</p> <p>6-2 [</p> <p>Find another solution!!</p> <p>Stella Williams Sr. Administrative Assistant Internal Audit Services O: (626) 535-5660</p> <p>CIT Bank, N.A. 75 N. Fair Oaks Avenue Pasadena, Ca 91103 www.cit.com</p>	<p>Thank you for your comments.</p> <p>6-1 The I-15 Corridor Project is anticipated to improve speed and overall travel conditions within the project limits. In addition, the drivers will have the option of using the Express Lanes that would provide travel at a minimum speed of 45 mph. For additional information on travel conditions improvements with the construction of the Express Lanes, please see Master Response MR-1.</p> <p>Construction of truck lanes is not part of the purpose of this project and it is not anticipated that the percentages of truck traffic will increase in the project area as a result of the project. However, truck traffic was taken into account in the traffic analysis prepared for the project. Table 1-4 in Chapter 1 of the Environmental Document shows that truck traffic constitutes 5-17 percent of the overall existing traffic. Table 2-18 in the Traffic and Transportation Section 2.1.9.2 of the Environmental Document shows the existing percentage of trucks by the number of axles observed at the various peak hour periods within the project limits. Commercial trucks with 3-axles or greater, and any vehicles that are towing trailers or large items will not be allowed to use the Express Lanes.</p> <p>6-2 Thank you for taking time to express your concerns regarding toll affordability. Several other commenters have expressed similar concerns regarding project funding and cost to users, which is addressed in Master Response MR 2.</p>

Comment 7: Kristi Snyder

From: kristi snyder [<mailto:snyderkristi@yahoo.com>]
Sent: Thursday, March 1, 2018 9:41 AM
To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
Subject: i 15 toll lanesF

- 7-1 [I can't attend the meeting tonight. I highly oppose putting in toll lanes on the 1-15. The 91 freeway toll lanes are still jammed after tolls and last Friday toll was \$25.00 one way after 2pm. We already paid for extra lanes thru Obama's American Recovery and Reinvestment Act. Just re-stripe and give us a car pool lane. The bridge at Baseline was just redone. Hopefully, they widened the bridge at that time. Tell the Government to give you the money that was designated for roads to Caltrans vs putting in the General Fund. Charging us to build the roads then charging us to use the roads not relieve traffic.
- 7-2 [
- 7-3 [

Kristi Ann Snyder

Seamount Financial Group, Inc. 750 E. Chapman Ave. Orange,
CA 92866 (714) 516-3390

Thank you for your comments.

- 7-1 Please see Master Response 1, on page 4-30 above, regarding Express Lanes Operational Improvements. As noted at the beginning of this section, master responses were prepared for those comments that were provided multiple times.
- 7-2 The purpose of the I-15/Baseline Road Interchange project was to improve circulation and traffic conditions at the interchange, while the project did substantially change the ramp configuration at this interchange, the project did not require any improvements to the existing I-15 bridges over Baseline Road. According to Table 1-10 in Section 1.6 Project Description, a new bridge structure will be constructed. This new structure will provide the freeway widening needed to accommodate the Express Lanes.
- 7-3 The project will largely be funded from toll fees. For more information Please see Master Response MR 2 for information on the funding of the Express Lanes and the cost to users.

Comment 8: Chuck Daniel	
<p>From: Chuck Daniel [mailto:chuckxrx@hotmail.com] Sent: Thursday, March 1, 2018 12:38 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Toll Lanes</p> <p>8-1 [Toll lanes are a ripoff! Taxpayers have paid untold millions over the years to be spent for roads. Where has all this money gone? Probably to social programs, AKA illegal immigrants!</p>	<p>Thank you for your comment.</p> <p>8-1 Please see Master Response 2, on page 4-31 above, regarding Express Lanes Funding and Cost to Users. As noted at the beginning of this section, master responses were prepared for those comments that were provided multiple times.</p>

Comment 9: Trena Meins



Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



Comments may be turned in at the public hearing
or sent via postal mail or email to:

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Trena Meins

Street Address: 12676 Foothill Blvd.

City: Rancho Cucamonga State: Ca Zip Code: 92336

Phone: (909) 899-1049 Cell: (951) 231-7083

Email: tmeins@sbdiocese.org

YOUR COMMENTS/QUESTIONS (1) As principal of the school security concerns

about the freeway entrance expanding and no soundwall as it stops

short of the school (2) The additional traffic and pollution are a

concern as this is a 50 yr. old school with 50 yr old windows and

16 yr. old air conditioners. We have Garden on one side and the freeway on the other.

Thank you for your comments.

9-1 Subsequent to the modeling effort for the project and during the comment period for the ED, it was revealed that the school had undergone construction that moved the school playground closer to the I-15 alignment. Receiver M-46 was modeled as the original playground location and identified the design year build condition noise level to be 63 dBA Leq. (Leq is the average A-weighted sound level measured over a given time interval. Leq can be measured over any time period, but is typically measured for one-hour periods and is expressed as Leq(h).) Receiver M-45 included in Figure 2-41 sheet 16 of the FED is acoustically equivalent to the location of the new playground.

Additional analysis was conducted to evaluate lengthening Barrier S-344 to provide benefit to Receiver M-45. The additional analysis is included in the Addendum to the NSR and NADR and has been included in the FED. Barrier S-344 was extended to the south along the Foothill Boulevard on-ramp from the barrier southern terminus (station 316+00 identified in the FED) down to station 311+07. Also, to shield the school playground from the I-15 mainline, an additional barrier segment was modeled

Comment 9: Trenna Meins	
	<p>along the I-15 mainline lanes starting at station 307+77 through station 314+00. These barriers were analyzed to determine the S-344 barrier extension that would be feasible for the school.</p> <p>As shown in Figure 2-50 and Table 2-84 of the FED and discussed in section 2.2.7.4, The extension of Barrier S-344 by approximately 1,030 feet would provide benefit to Receiver M-45.</p> <p>Therefore, based on studies completed to date and the approval of Barrier S-344 conducted during the soundwall survey, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-344 located along the edge of shoulder with a length of 6,480 feet and average height of 14 feet. Calculations based on preliminary design data show that the barrier would reduce noise levels by 5 to 10 dBA for 138 residences at a cost of \$3,416,500. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.</p> <p>9-2 The project is planned to address the existing and future traffic demand. As discussed in Chapter 1 Section 1.4 Purpose and Need, the Caltrans Transportation</p>

Comment 9: Trena Meins	
	<p>Concept Report for the study section of I-15 has set “D” as the acceptable LOS for the facility within the project area from SR-60 to SR-210. The project limits have been identified in the report as a segment of the corridor that needs additional capacity to address existing and projected traffic demands occurring within the project limits. Traffic and Transportation Section 2.1.9.3 indicates that the project is planned to address the existing and future traffic demand forecasted through the horizon year of 2045. The analysis shows that the travel demand will continue to grow within the project limits. The project improvements will attract additional traffic to the I-15 project limits; however, Table 2-26 and Table 2-40 show that the traffic volume within the GP lanes will be less with the construction of the Express Lanes when compared with the No Build Alternative. In addition, the analysis shows that with the construction of the Express Lanes, the forecasted speed will experience improvement during the morning and evening peak hour periods within the project limits. Even though there are GP lanes segments within the project limits that will continue to perform at an unacceptable Level of Service of E or below, there will be an overall improvement in traffic density within the</p>

Comment 9: Trena Meins	<p>lanes, and several segments within the project limits are forecasted to have LOS improvement when compared with the No Build conditions.</p> <p>Air quality analysis for the project is provided in section 2.2.6 of this document. According to Section 2.2.6, the project is included in the SCAG 2016–2040 RTP/SCS Amendment 1 and SCAG 2019 FTIP Amendment 1 under project numbers 4122006 and 20159901, respectively. The SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017, and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018. As such it is concluded that the project’s operational emissions meet the transportation conformity requirements imposed by EPA and SCAQMD.</p> <p>Furthermore, the 2016 RTP/SCS includes the I-15 Express Lanes project as part of its greenhouse gas (GHG) emissions reduction measures that provide relief from existing and projected congestion.</p> <p>Furthermore, localized emissions of particulate matter (PM) from transportation projects are required to be analyzed as part of the transportation conformity process. Total traffic volumes, truck volumes, and</p>
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Comment 9: Trena Meins	
	<p>other operational traffic characteristics of projects are required to be presented to the SCAG Transportation Conformity Working Group (TCWG) to determine the potential for a project to be a “project of air quality concern” (POAQC), and result in particulate matter hot-spots. The required information was presented to the TCWG at their July 26, 2016 meeting. TCWG determined that the I-15 Corridor Project is “Not a Project of Air Quality Concern, (Not a POAQC)” and also that a hot spot analysis was not required. EPA, and FHWA provided their respective concurrences via email after the meeting. A copy of the TCWG project list is included in Section 4.4 of this ED.</p> <p>The project will comply with Standard Specification 14-9.02 and other standard practices according to the Air Resources Board and South Coast Air Quality Management District (SCAQMD) requirements for air quality restrictions such as reducing idling time, proper maintenance of equipment, and fugitive dust control during the construction period.</p> <p>All vehicles and equipment will meet appropriate model year EPA/NHTSA/CARB standards related to fuel efficiency and emissions. All engines or portable engine-driven equipment</p>

Comment 9: Trena Meins	
	<p>required to obtain permits will obtain either a CARB Portable Equipment Registration or a permit from SCAQMD.</p> <p>An additional avoidance/minimization measure will be implemented to further minimize impacts. It includes providing schools with advance notice of construction activity that is expected to occur within 1,000 feet of school property, as identified in measure AQ-4 in Section 2.2.6.4.</p>

Comment 10: Maitha Rosales



Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



Comments may be turned in at the public hearing
or sent via postal mail or email to:

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Maitha Rosales
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City: Fontana State: Ca Zip Code: 92336
Phone: 909, 463-0357 Cell: 909, 2008446
Email: titame383@gmail.com

YOUR COMMENTS/QUESTIONS

10-1

Really need the sound wall
#396 All our neighbors have been wanting
it for a long time. We can't even open our
back windows because it's so loud.

Thank you for your comment.

10-1 As discussed in the Noise Section 2.2.7.4 Noise Barrier S-396 at the barrier height identified in the NSR, NADR and ED (12 feet) would provide "benefit" (5 dB or more of noise reduction) to 10 modeled receivers. During the public comment period, comments were received from the Starbucks which is represented by modeled location M-223, which requested that Barrier S-396 be shortened to maintain as much visibility from the I-15 alignment. Additional modeling was conducted and is included in the Addendum to the NSR and NADR to determine whether Barrier S-396 could be shortened in a way that would not result in a change in the effectiveness of Barrier S-396 for the residential receivers represented by modeled receivers M-225 through M-234 identified in the NSR.

Comment 11: Tony Morales



Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



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California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Tony Morales (Foothill Blvd) Sacred Heart Church

Street Address: 12711 Mediterranean Dr.

City: Rancho Cucamonga State: CA Zip Code: 91739

Phone: (909) 528-3259 Cell: (9)

Email: TonyMoralesRC@gmail.com

YOUR COMMENTS/QUESTIONS

11-1

We Request ① two right turn lanes from West bound Foothill Blvd to N.B. 15. You can use the greenbelt on the right shoulder to fit this in.

11-2

there is heavy traffic now, and it can take up to 45 minutes to exit the Church. ② Extend the sound wall on this same onramp further to Foothill and or better, Build it along our wall so that transients don't have the voided space to camp, and to keep noise away from the school better. Thank you.

Thank you for your comment.

11-1 The purpose of the project is to relieve congestion and improve mobility on the I-15 freeway within the project limits. Based on coordination with the City of Rancho Cucamonga, the City has no improvement plans to widen the west bound Foothill Boulevard. However, a portion of the North Bound on-ramp from Foothill Boulevard will be widened to accommodate more vehicles which is anticipated to improve the operational performance of this ramp. Table 2-30, and Table 2-43 in the Traffic and Transportation Section 2.1.9.2 of the Environmental Document show that the Foothill Boulevard On-Ramps function at an acceptable LOS of D or better in the years 2024 and 2045 with the Build Alternative, respectively. If interested in additional information regarding the City's circulation plans please contact the City Engineering Department at phone number 909-774-2740.

11-2 Subsequent to the approval of the Noise Study Report (NSR) and Noise Abatement Decision Report (NADR) for the project, it was revealed during the comment period for the ED that the school had undergone construction that moved the school playground approximately 200 feet closer

Comment 11: Tony Morales

to the I-15 alignment. The original NSR and NADR modeled receiver M-46 at the original playground location and identified the design year build condition noise level to be 63 dBA Leq.

Additional analysis was conducted to evaluate lengthening Barrier S-344 to provide benefit to Receiver M-45, shown in Figure 2-41 sheet 16 of the FED, which is acoustically equivalent to the new location of the playground. The additional analysis is included in an Addendum to the NSR and NADR and has been included in the FED.

Barrier S-344 was extended to the south along the Foothill Boulevard on-ramp from the barrier southern terminus (station 316+00 identified in the FED) down to station 311+07 (see Figure 2-50 in the FED). Also, to shield the school playground from the I-15 mainline, an additional barrier segment was modeled along the I-15 mainline lanes starting at station 307+77 through station 314+00. These barriers were analyzed to determine the S-344 barrier extension that would be feasible for the school.

As shown in Figure 2-50 and Table 2-84 of the FED and discussed in section 2.2.7.4, the extension of Barrier S-344 by approximately 1,030 feet would provide

Comment 11: Tony Morales	
	benefit to Receiver M-45. Based on the addendum to the NSR the addition of a 14-foot-high barrier extending from station 307+77 to station 314+00 along the I-15 mainline and an additional barrier extending from station 311+07 up to station 316+00 would provide 7 dB worth of noise reduction at modeled receiver M-45.

Comment 12: Jack Licano

15 THE I-15 CORRIDOR PROJECT
Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018

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or via email to: james.shankel@dot.ca.gov
Please use "Interstate 15 Corridor Project" in the
subject line of the email.

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City: FONTANA State: CA Zip Code: 92336
Phone: (909) 829-9612 Cell: (909) 900-3010
Email: LICANO4@AOL.COM

12-1

YOUR COMMENTS/QUESTIONS TOTALLY OPPOSED, WE DON'T EVEN HAVE REG.
CAR POOL LANES YET, USING 1/2% SALES TAX WAS NOT APPROVED
FOR TOLL ROADS
210 STILL NOT STRIPPED FOR 4 LANES + CAR POOL THAT WAS
BUILT FOR

Thank you for your comment.

12-1 The Express Lane is the only Build Alternative that was found to be financially feasible for the project. Please see Master Response 2, on page 4-31 above, regarding Express Lanes Funding and Cost to Users. As noted at the beginning of this section, master responses were prepared for those comments that were provided multiple times.

The 2016 Caltrans SR 210 Transportation Concept Report (TCP) indicates that existing SR 210 within the project limits consists of six GP lanes and two HOV lanes. As indicated in the TCP, in 2016 this segment was at LOS B, which is better than the its planned concept LOS of D.

Comment 13: David Nalback



Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



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California Department of Transportation
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San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: David Nalbach
Street Address: 13010 Malvasia Way
City: Rancho Cucamonga State: CA Zip Code: 91739
Phone: (909) 635-4297 (Cell:)
Email: dbofr@charter.net

YOUR COMMENTS/QUESTIONS

13-1





Having experienced the construction of the
lane additions a year or so ago, I have concerns
about the hours of construction. There were considerable
sleep issues the last time around.

Thank you for your comment.

13-1 A majority of construction work will
take place during the day; however,
some work is necessary during night
time when lane and ramp closures
are required. The hours of
construction will be determined by
the Design Builder at the Design-
Build phase of the project
development.




The Design-Builder will be required
to construct soundwalls as an early
construction activity, which will
further reduce the noise impacts
associated with construction
activities. For additional
information, please see Master
Response MR 4, Project
Construction Noise Impacts.

Comment 14 A: Larry Meyer


14, A-1	<div>  THE I-15 CORRIDOR PROJECT Public Hearing, Etiwanda Intermediate School, Rancho Cucamonga, California, March 1, 2018 </div> <div>    </div> <div> Comments may be turned in at the public hearing or sent via postal mail or email to: James Shankel, Senior Environmental Planner California Department of Transportation 464 West 4th Street, 6th Floor, MS-827 San Bernardino, California 92401-1400 or via email to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email. </div> <div>CONTACT INFORMATION</div> <div> Name: <u>Larry Meyer</u> Street Address: _____ City: <u>Fontana</u> State: <u>CA</u> Zip Code: <u>92334</u> Phone: (____) _____ Cell: (____) _____ Email: _____ </div> <div> YOUR COMMENTS/QUESTIONS <u>Concerned the sound wall stops too short</u> <u>at Fontana Blvd & I-15. Needs to be longer to create more</u> <u>sound barrier for Sacred Heart School & better provide</u> <u>security for the students.</u> </div>	<p>Thank you for your comment.</p> <p>14 A-1 Subsequent to the approval of the Noise Study Report (NSR) and Noise Abatement Decision Report (NADR) modeling effort for the project, it was revealed during the comment period for the ED that the school had undergone construction that moved the school playground approximately 200 feet closer to the I-15 alignment. The original NSR and NADR modeled receiver M-46 at the original playground location and identified the design year build condition noise level to be 63 dBA Leq. Additional analysis was conducted to evaluate lengthening Barrier S-344 to provide benefit to Receiver M-45, shown in Figure 2-41 sheet 16 of the FED, which is acoustically equivalent to the new location of the playground. The additional analysis is included in an Addendum to the NSR and NADR and has been included in the FED.</p> <p>Receiver M-46 was modeled as the original playground location and identified the design year build condition noise level to be 63 dBA Leq. Receiver M-45 included in Figure 2-41 sheet 16 of the FED is acoustically equivalent to the location of the new playground.</p> <p>Additional analysis was conducted to evaluate lengthening Barrier S-344 to provide benefit to Receiver M-45. The</p>
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Comment 14 A: Larry Meyer		
		<p>additional analysis is included in an Addendum to the NSR and NADR and has been included in the FED. Barrier S-344 was extended to the south along the Foothill Boulevard on-ramp from the barrier southern terminus (station 316+00 identified in the FED) down to station 311+07 (see figure 2-50 in the FED). Also, to shield the school playground from the I-15 mainline, an additional barrier segment was modeled along the I-15 mainline lanes starting at station 307+77 through station 314+00. These barriers were analyzed to determine the S-344 barrier extension that would be feasible for the school.</p> <p>As shown in Figure 2-50 and Table 2-84 of the FED and discussed in section 2.2.7.4, the extension of Barrier S-344 by approximately 1,030 feet would provide benefit to Receiver M-45. Based on the addendum to the NSR the addition of a 14-foot-high barrier extending from station 307+77 to station 314+00 along the I-15 mainline and an additional barrier extending from station 311+07 up to station 316+00 would provide 7 dB worth of noise reduction at modeled receiver M-45.</p>

Comment 14 B: Larry Meyer




14, B-1	<div>  THE I-15 CORRIDOR PROJECT </div> <div> Public Hearing, Etiwanda Intermediate School, Rancho Cucamonga, California, March 1, 2018 </div> <div>   </div> <div> Comments may be turned in at the public hearing or sent via postal mail or email to: James Shankel, Senior Environmental Planner California Department of Transportation 464 West 4th Street, 6th Floor, MS-827 San Bernardino, California 92401-1400 or via email to: james.shankel@dot.ca.gov Please use "Interstate 15 Corridor Project" in the subject line of the email. </div> <div>CONTACT INFORMATION</div> <div> Name: <u>Larry Meyer</u> Street Address: _____ City: <u>Fontana</u> State: <u>CA</u> Zip Code: <u>92336</u> Phone: (____) _____ Cell: (____) _____ Email: _____ </div> <div>YOUR COMMENTS/QUESTIONS</div> <div> <u>Current proposal does not take any</u> <u>property from Sacred Heart parish school at South Hill Blvd.</u> <u>Please keep those plans. Any loss of property against the</u> <u>freeway would exacerbate traffic circulation & parking.</u> </div>	14 B-1 Thank you for your comment. To confirm, there are no plans to acquire any property from the Sacred Heart Parish School prop- erty. According to Project Descrip- tion Section 1.6 Right of Way sub- section, and Relocation and Real Property Acquisition Section 2.1.6 of the Environmental Document, the project will be constructed mostly within the existing right of way, except for three locations that require Temporary Construction Easements for construction activities, and one Permanent Easement for utility relocation. None of these locations involve the property of Sacred Heart Parish School.
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Comment 14 C: Larry Meyer



THE I-15 CORRIDOR PROJECT

Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018

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California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the subject line of the email.

CONTACT INFORMATION

Name: Larry Meyer

Street Address: _____

City: Fontana State: CA Zip Code: 92336

Phone: (____) _____ Cell: (____) _____

Email: _____

14-C-1

YOUR COMMENTS/QUESTIONS

As students at Sacred Heart School should be considered sensitive receptors, please assure School Principal & Administration that adequate particulate matter mitigation efforts are incorporated into the project.


Thank you for your comment.

14-C-1 Air quality sensitive receptors, which include the Sacred Heart Parish School and other locations, are discussed in Section 2.2.6 Air Quality, Sensitive Receptor Locations Section of the Environmental Document prepared for the project, and detailed in the project's Air Quality Report that is included as part of the administrative record for this project. Localized emissions of particulate matter (PM) from transportation projects are required to be analyzed as part of the transportation conformity process. Total traffic volumes, truck volumes, and other operational traffic characteristics of projects are required to be presented to the SCAG Transportation Conformity Working Group (TCWG) to determine the potential for the project to be a "project of air quality concern" (POAQC), and result in particulate matter hot-spots. The required information was presented to the TCWG at the July 26, 2016 meeting. TCWG determined that the I-15 Corridor Project is Not a POAQC, and also that a hot spot analysis was not required. EPA, and FHWA provided their respective concurrences via email after the meeting. A copy of the TCWG

Comment 14 C: Larry Meyer	
	<p>project list is included in Section 4.4 of this ED.</p> <p>In addition, localized carbon monoxide (CO) analyses conducted for this project concluded that impacts to local air quality would be less than significant. The local CO and PM analyses are provided in Section 2.2.6 Air Quality (Localized Carbon Monoxide Hot-Spot Evaluation and Localized PM2.5 and PM10 Hot-Spot Evaluation, respectively). In addition, the MSAT emissions analysis provided under the Section titled Mobile Source Air Toxics, in Air Quality Section 2.2.6 documents that all MSAT emissions at the horizon year 2045 would be less than current baseline levels.</p> <p>The Draft Environmental Document provided results of analysis performed, which included (ambient air quality standards, construction period and operational emissions estimates, local dispersion modeling analyses and avoidance and minimization measures) to address and minimize potential impacts resulting from the project. As stated in Chapter 1 under subheading “Other Project Provisions”, standard measures to protect air quality would be implemented as part of the project:</p>

Comment 14 C: Larry Meyer	
	<ul style="list-style-type: none"> • The project will comply with Standard Specification 14-9.02 and other standard practices according to the Air Resources Board and South Coast Air Quality Management District (SCAQMD) requirements for air quality restrictions such as reducing idling time, proper maintenance of equipment, and fugitive dust control during the construction period. • All vehicles and equipment will meet appropriate model year EPA/NHTSA/CARB standards related to fuel efficiency and emissions. • All engines or portable engine-driven equipment required to obtain permits will obtain either a CARB Portable Equipment Registration or a permit from SCAQMD. <p>Additional avoidance/minimization measure will be implemented to further minimize impacts. It includes providing schools with advance notice of construction activity expected to occur within 1,000 feet of the school property as identified in measure AQ-4 in Section 2.2.6.4.</p>

Comment 15: Amy Isenberg

 **THE I-15 CORRIDOR PROJECT**

Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018

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or sent via postal mail or email to:

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California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Amy Isenberg

Street Address: 2080 N Colony Way

City: San Bernardino State: CA Zip Code: 92407

Phone: 909, 456-5385 Cell: same

Email: amy.j.cook@gmail.com

YOUR COMMENTS/QUESTIONS I love it! I drive this corridor every
day and cannot wait until it is completed. I hope
you can minimized delays and closing lanes during
construction.

Thank you for your comment, we appreciate and acknowledge your support.

15-1 Final closures and construction strategies during construction will be determined by the Design-Builder. The Transportation Management Plan developed for the Design-Build phase will include the development of lane closure dates and times. A public awareness campaign will be conducted to provide the public with information regarding construction activities and upcoming detours and closures to allow the public to make informed travel decisions.

Comment 16: Christopher Quach



Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



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or sent via postal mail or email to:

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Christopher Quach
Street Address: 7349 Reserve Pl.
City: Rancho Cucamonga State: CA Zip Code: 91739
Phone: (951) 214-3128 Cell: ()
Email: Tefuri951@gmail.com

YOUR COMMENTS/QUESTIONS

16-1

I have personally noticed the improvements
& benefits of adding express lanes (SR-91). I
fully support this project not only because
I am a local resident, but it will improve overall traffic
on the I-15, just like the SR-91.

16-1 Thank you for your comment, we
appreciate and acknowledge your
support.

Comment 17: Public Hearing Court Report – David Allred

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1	SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY	
2	(SBCTA)	
3	- - -	
4)	<div style="border: 2px solid red; padding: 2px; color: red; font-weight: bold;">CERTIFIED COPY</div>
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9	INTERSTATE 15 CORRIDOR PROJECT	
10	PUBLIC HEARING	
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14	REPORTER'S TRANSCRIPT OF PUBLIC COMMENTS	
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Comment 17: Public Hearing Court Report – David Allred

1 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY
2 (SBCTA)
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5 INTERSTATE 15 CORRIDOR PROJECT)
6) PUBLIC HEARING
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13 REPORTER'S TRANSCRIPT OF PUBLIC COMMENTS,
14 taken at Etiwanda Intermediate School, 6925 Etiwanda
15 Avenue, Multipurpose Room, Rancho Cucamonga,
16 California, commencing at 5:30 p.m., on Thursday,
17 March 1, 2018, before Claudia R. Garcia, CSR No.
18 12812.

Comment 17: Public Hearing Court Report – David Allred

1 RANCHO CUCAMONGA, CALIFORNIA; THURSDAY, MARCH 1, 2018
 2 5:30 P.M.

4 MR. ALLRED: David Allred, A-L-L-R-E-D.

17-1 5 All right. So I asked questions to a person
 6 in charge of the finances. And it's apparent that
 7 we're getting double taxed, at least on a portion of
 8 this because we're relying heavily on Measure I. And
 9 it looks like it's a hundred-fifty million dollars
 10 approximately that's being used from Measure I for
 11 this project.

12 From what I can tell, that's about three
 13 years worth of revenue collection from Measure I,
 14 three years' worth. And that's too much. We're being
 15 taxed for Measure I, half a cent sales tax. And then
 16 we're getting tolled when we use the lanes. So having
 17 to pay a second time to make that lane, I think that's
 18 my biggest complaint.

19 So please don't double tax us. It's not
 20 right. They tried to do the same thing in Orange
 21 County on the 405 freeway after measure -- I don't
 22 remember the measure letter. Same thing though as
 23 Measure I where they use a percentage of sales tax to
 24 pay for road improvements. And so they were creating
 25 a new road. And then Cal Trans or somebody came along

3

Thank you for your comments.

17-1 The Express Lanes is the only financially feasible alternative to meet the project's purpose and need. Please see Master Response MR 2 regarding the I-15 Express Lanes Funding and Cost to Users.

The Interstate 405 Improvement Project proposed widening the corridor by adding one general purpose lane and one tolled Express Lane in each direction. The new tolled Express Lanes will be combined with the existing high occupancy vehicle (HOV) lane to create two Express Lanes in each direction. The Project will also consist of the replacement of 18 bridges, the construction of new and widened bridges, improvements to the auxiliary lanes, relocations of utilities, construction of new sound walls, and additions to the tolling and Transportation System Management and Transportation Demand Management Systems. In 2012, Orange County Transportation Authority amended the Measure M plan by \$700 million to deliver the project. In 2017, the California Transportation Commission approved the project and is currently undergoing its first phase of construction.

Comment 17: Public Hearing Court Report – David Allred

17-1
cont.

1 saying that they're going to take those new lanes on
2 the 405 and turn them into toll lanes.
3 And they successfully fought it, last I
4 heard. And they kept the toll lanes from coming in.
5 It would be great if we could do that here. Though, I
6 see it's not quite the same because they were using
7 complete revenue from their measure, whereas, this
8 one, it's just partial. But it's still 33,
9 35 percent, which is 33 to 35 too much.

10

Comment 18: Public Hearing Court Report – Robert Torres

<p>18-1</p> <p>11 MR. TORRES: Robert Torres. 12 Sign Senate Bill 32 mandates a 40 percent 13 reduction in California greenhouse gasses emissions by 14 2030. 15 No toll lane will achieve that or even 16 discusses it. They do not even discuss it any place 17 in their plans, how it's going to be done. 18 Second point, 2017, climate change scoping 19 plan update. The proposed strategy for achieving 20 California 2030 greenhouse gas target. Okay. So the 21 climate change -- this is how you're going to reduce 22 the greenhouse gases. And they're saying that 23 4.2 million, zero emission vehicles will be electric 24 by 2030. Cars and trucks will reduce their fossil 25 fuel input by 50 percent by 2030. And they have,</p> <p>4</p>	<p>Thank you for your comment.</p> <p>18-1 This comment raises issues related to AB 32, SB 32, AB 109, AB 134 and fossil fuel emissions. Each of these topic areas are addressed in this response. AB 32 required the California Air Resources Board (ARB) to develop a Scoping Plan that describes the approach California will take to reduce GHG emissions. The current Scoping Plan, which also addresses SB 32 GHG reduction targets was approved in November 2017, and provides a path for the State to reduce year GHG emissions by 40 percent from 1990 levels by 2030. The Scoping Plan addresses mobile-source (i.e., automobile) GHG emissions via adoption of low-carbon fuels and the Sustainable Communities Strategy (SCS) required of each region as part of SB 375.</p> <p>To the extent that vehicles use fuel purchased in California, all vehicles will achieve GHG emissions reductions related to low-carbon fuel consumption. With respect to SB 375, SCAG is required to prepare an SCS that is incorporated into the RTP to demonstrate how the region will meet its SB 375 GHG reduction targets from automobiles and light trucks of 8% below 2005 per capita emissions levels by 2020 and 13% below 2005 per capita emissions levels by 2035. The 2016-2040 RTP/SCS is the most recent plan that demonstrates how these state-mandated targets will be achieved at the regional level. As discussed in Section 3.2.3.1 of the Environmental Document, the project is identified in SCAG 2016-2040 RTP/SCS under project number</p>
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Comment 18: Public Hearing Court Report – Robert Torres18-1
cont.

1 according to the road charge report, they have future
2 revenue per use. But that now is the toll versus an
3 electric car. The toll has no way of stopping
4 emissions. An electric car is zero emission from the
5 beginning. And I'll give you the case in point, the
6 old electric trolleys, the old electric buses.

7 We can retrofit those corridors for every
8 car, taxi, truck, pickup truck, from here to the any
9 place in the United States immediately as opposed to a
10 toll lane which uses a technology device to track and
11 bill. Whereas with electric, zero emission
12 technology, you pay as you go.

13 So now you have funding for road service
14 maintenance. And that's all that the Senate Bill 32
15 wants to do.

16 Now, we go down a little more in Senate
17 Bill 32, Section 1, letter A, you are to adapt
18 regulations to achieve maximum technologically
19 feasible and cost-effective greenhouse gas emission
20 reductions.

21 Senate Bill 32, Section 1, you are to
22 feasible cost effective. Section B, maintain and
23 continue reduction. Section C, it links disadvantaged
24 communities. Section D, disadvantaged communities and
25 transparent accountability, the toll lane project does

5

4122006, and directly implements, or supports, major initiatives identified in the RTP/SCS. The low-carbon fuel standard and RTP/SCS are only two components of how the State will achieve its GHG reduction targets identified by the legislature in AB 32 and SB 32, but the project's consistency with the RTP/SCS demonstrates that the project would not conflict with GHG reduction efforts. Given the vast number of sources of GHG emissions, no individual project or sector is responsible for reducing GHG emissions.

AB 109 and AB 134 (Budget Act of 2017) addresses State spending related to mobile source emissions reductions, climate change, and community air protection initiatives, which are part of the State's overall GHG reduction effort. These budget allocations to specific programs do not include funding to transportation infrastructure projects, but rather to programs that incentivize owners to replace older vehicles and equipment with newer models that emit less GHGs. No discussion of impacts related to AB 109 or AB 134 is warranted, as these funds are not directly related to the project.

With respect to fossil fuels, health effects related to fossil fuel combustion emissions are discussed in Section 2.2.6.3 (Mobile Source Air Toxics) of the Environmental Document. Project MSAT emissions were quantified and presented in Table 2-67 in Section 2.2.6.3. As shown therein, Horizon Year MSAT emissions under the Build Alternative would

Comment 18: Public Hearing Court Report – Robert Torres18-1
cont.

1 not have transparent accountability. And it doesn't
 2 reduce emissions per the law.

3 Section 2 now, of the same Senate Bill 32,
 4 Number 38566, it ensures that the state is going to
 5 reduce emissions. So now you have an executive order.
 6 You have the bills that say you've got to clean it up.
 7 You have this section that says you got to ensure that
 8 it's going to be done. Toll lanes don't do that. And
 9 now you have September 15th, 2017, the budget transfer
 10 bill, AB 109 and AB 134, advanced zero emission
 11 technology will be funded.

12 And even though the toll lane projects have
 13 federal alternative corridor grant development, not
 14 enough. They have the money to study electricity.
 15 They didn't even put in for it. It wouldn't have cost
 16 a lot. How many homeboys do you know who can put a
 17 hydraulic system into the back of a car so that it
 18 hooks up to pumps?

19 Every single one of us could be working
 20 retrofitting. But instead, you're going to give it to
 21 China with a lithium battery?

22 So now we have the second clean air act
 23 violation. Because last week Michigan Medical
 24 University, Professor Doctor Lee, finds a positive
 25 correlation between fossil fuel emission pollution and

6

be reduced when compared to the No Build
 Alternative.

Comment 18: Public Hearing Court Report – Robert Torres

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18-1
cont.

1 criminality.
2 But in the words of the professor on ethical
3 behavior, so all things taken away, the particular
4 matter of fuel causes criminality in humans.
5 The week before that, they have another
6 university that verifies endo chronological cancers,
7 autism, asthma, mental retardation, mitochondrial
8 damage from particular patterns, which is the reason
9 for the Assembly Bill 109 and 134.
10 So the toll lanes now, every single one of
11 them must be stopped. Must cease and desist until we
12 go into this zero emission multi-motor electric
13 corridor retrofits.
14 Illnesses caused by fossil fuel pollution,
15 verified. Adenocarcinoma, A-D-E-N-O-C-A-R-C-I-N-O-M,
16 non-small cell, non-curable lung cancer. My wife is
17 in fourth stage. Never smoked. This is fossil fuel.
18 The second one they show is endo
19 chronological diseases to include cancers from fossil
20 fuel articulate matter. They also show asthma,
21 attention deficit, mental retardation, and
22 mitochondrial DNA damage in the embryonic stages.
23 If that isn't enough -- if that is not enough
24 to go zero electric corridor emission retrofit, what
25 are we waiting for? You know what Albert Einstein

7

Comment 18: Public Hearing Court Report – Robert Torres18-1
cont.

1 says: Self destruction is insanity. We have a
2 society dealing on fossil fuel self destruction. The
3 evidence is there, but we play the game of semantics.
4 And as you know, semantics is the tongue of the Satan.
5 Lawyers use it all the time.

6 (Ending time 7:22 p.m.)
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<p>Comment 19: Jeff Johnson</p>	
<p>From: Jeff Johnson [mailto:orch01@hotmail.com] Sent: Sunday, March 4, 2018 4:07 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: I-15 toll lanes</p> <p>19-1 [First let me say that it was ridiculous that you didnt hold a public forum in the high desert as this little gem is going to impact us the most.</p> <p>19-2 [As an individual who has traveled the pass as a commuter for the better part of 30 years that the addition of toll lanes is another in a long line of lousy ideas for the cajon pass. As a lifelong resident born and raised in California i recognize this for what it really is. A money grab for those that own the toll road, paid for by public tax dollars. All you have to do is look at the 91. It is a great money maker but overall has no actual impact on traffic. It is still a snarled mess.</p> <p>19-3 [I would love to know what engineer decided to “fix” the 15-215 interchange at devore by swapping the exits to get on the 15 and 215. Used to be you would stay to the left to continue on the 215 and stay to the right to continue on the 15. It has been that way since the cajon has been there. Now we have nothing but accidents almost every single day on that interchange. Also i believe those of us that do commute everyday deserve a break from the constant construction everyday for the last 20 years. Toll lanes are a bad idea. Dont do it. Our gas tax pays for “freeways”. This isnt the east coast where you pay every 10 ft.</p> <p>Sent from my iPhone</p>	<p>Thank you for your comments.</p> <p>19-1 Several facilities were surveyed in order to identify the best accommodation for the public hearing such as capacity and availability of parking. In addition, the location needed to provide the most accessibility for the public members within the study area that represents the most likely extent of trip distribution within the project area. The study area boundaries are shown in the Traffic and Transportation Section 2.1.9.2, Figure 2-16 Sub-Region for vehicle-hours of delay (VHD) Analysis. The Etiwanda Intermediate School is within an approximate location of the project area and surrounding cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana. The public hearing was advertised in the widely distributed Daily Bulletin in the Press Enterprise and in the Fontana Herald News. Additionally, notices were published in Spanish in La Prensa. A copy of the public notice was mailed to a list of property/parcel owners/occupants that covered a quarter-mile radius along the I-15 Corridor Project. The notice was also mailed to interested groups and individuals. The meeting was attended by 24 members of the public where representatives from SBCTA and Caltrans were available to provide information and respond to the public members comments and questions.</p> <p>19-2 The proposed project is based on the unique geographic characteristics of the area as the I-15 remains the sole mainline route connecting the Inland Empire and Southern California metropolitan regions with the High Desert, Las Vegas and beyond.</p>

Comment 19: Jeff Johnson

The tolled Express Lanes are the only financially feasible alternative to improve travel conditions within the project limits. The project limits were determined based on the highest levels of need due to congestion. Please also see Master Responses MR 1 for the anticipated Express Lanes Operational Improvements of the I-15 within the project limits, and MR 2 for information on Express Lanes Funding and Cost to Users.

19-3 The I-15/I-215 interchange reconfiguration at Devore was to establish route continuity for the I-15 and to meet Federal standards for exit approach of the primary route. As such, the intent of the reconfiguration was that motorists on the I-15 primary freeway would not need to change lanes in order to stay on the primary route.

For information on the I-15/I-215 project, please contact SBCTA Public Relations (909) 885-4407.

Comment 20: Michelle Schumacher

From: Michelle Schumacher [mailto:schumacherfamily@me.com]
 Sent: Sunday, March 4, 2018 7:02 PM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Subject: Managed Toll Lanes - DONT DO IT

20-1

New taxes are to be voted on by the residents in the State of California - having a choice of toll or no toll is not legal and should not happen - has everyone not already learned what needed to be learned from teh mess on the 91? Wake up and stop the madness.

Do people understand the Toll Road concept? Is 4 toll lanes on the 5. It will look like this? Corona last night. A failed experiment.



Thank you for your comment.

20-1 The tolls on the I-15 will only apply to the Express Lanes, not to the GP Lanes. The legislative basis for the operation of Express Lanes in California was established in AB 194. AB 194 authorizes a regional transportation agency or Caltrans to develop, issue bonds for funding the construction, and to operate toll facilities. Please see Master Response MR 2 Express Lanes Funding and Cost to Users for a more detailed discussion regarding this topic.

Comment 21: Sharon Gagon	
<p>From: silverfox10361 Gagon [mailto:sharon.gagon@gmail.com] Sent: Monday, March 5, 2018 9:24 AM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: toll lanes</p> <p>21-1 [I am not happy with the charging 4 toll lanes please dont pass this</p> <p>Sharon -- Free spirit</p>	<p>Thank you for your comment.</p> <p>21-1 Tolls will be used to fund the cost of the project constructions. Several others have expressed similar concerns regarding project funding and cost to users which is discussed in more detail in Master Response MR 2 Express Lanes Funding and Cost to Users.</p>

Comment 22: Sandy Needs-Ramirez	
<p>From: Sandy Needs-Ramirez [mailto:sandra.needs24@gmail.com] Sent: Monday, March 5, 2018 3:46 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Opposition to toll road on I-15</p> <p>22-1 [It is a freeway. What part of "FREE" does the state of California not understand. We already paid for this once.</p>	<p>Thank you for your comment.</p> <p>22-1 Tolls will be charged for the use of Express Lanes only. Several others have expressed similar concerns regarding project funding and cost to users which is discussed in more detail in Master Response MR 2 Express Lanes Funding and Cost to Users.</p>

Comment 23: Dave Fernandez

From: Dave Fernandez [mailto:AlpineDriver@Reagan.com]
 Sent: Monday, March 5, 2018 7:03 PM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Subject: Toll lanes I-15

23-1 [Mr Shankel I was wondering why the State of Kalifornia is always throwing good money after bad when it comes to toll lanes? The I-10 toll lanes have been a waste of money for 40 years and only causes more traffic. As for the 91 and 110 are both boondoggle's and a waste of tax payers money. They only cause more traffic and the poor can not afford to use them. Now you want to waste tax payers money on the 15. Why doesn't Kalifornia fix the highways instead of wasting money on another boondoggle such as toll lanes on the 15 or on the train to nowhere?

Dave
 -- Reagan Multimap

Thank you for your comment.

23-1 Due to the limited funding resources, the Express Lanes alternative is the only financially feasible alternative for improvements to the I-15 corridor. Several others have expressed similar concerns regarding project funding and cost to users which is discussed in more detail in Master Response MR 2 Express Lanes Funding and Cost to Users.

Comment 24: Kenneth Hunter	
<p>24-1</p> <p>From: Kenneth Hunter [mailto:arrowheadken@gmail.com] Sent: Monday, March 5, 2018 10:03 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Proposed I 15 toll lanes</p> <p>Dear Sirs,</p> <p>The proposed toll lanes are not wanted by Tax Payers. The toll lanes are wanted by Tax Receivers. The toll lane proposal exists for the sole purpose of increasing money and power for SCAG and all the politicians who are on the boards of the Regional Transportation Authority of each County.</p> <p>These individual City politicians agree to these bad policies and projects so that they can in turn get funding for their own personal pet projects that make themselves look good for re-election. The entire process is corrupt in this manner, however the proposed toll lanes are bad policy because they will increase traffic congestion and not decrease it as falsely claimed by government proponents with made up statistics.</p> <p>Please repent and turn away from these bad policies and unwanted projects. Please stop pretending that you know what is best for us. Please stop victimizing us through your virtue signaling and cognitive distortions.</p> <p>Ken Hunter 20 Dearborn Circle Redlands, CA 92374 909-744-7822</p>	<p>Thank you for your comment.</p> <p>24-1 Caltrans and SBCTA are dedicated to providing a safe, sustainable, integrated, and efficient transportation system, and are at the same time also dedicated to being responsible stewards for the public. The planned I-15 CP has been developed accordingly.</p> <p>The Express Lanes will be available for drivers who choose to use them and pay the toll. The Express Lanes provide travel time savings and trip reliability. The traffic analysis prepared for the project shows that traffic congestion will be decreased and travel time improved as a result of the project. MR 1 provides additional information regarding the Express Lanes operational improvements in the I-15 CP limits.</p> <p>For additional information on the project's funding and cost to users, please see Master Response MR 2 Express Lanes Funding and Cost to Users.</p>

Comment 25: Evie Anguiano

From: evie anguiano [mailto:evie_anguiano@yahoo.com]
 Sent: Monday, March 5, 2018 11:03 PM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Subject: I-15 CORRIDOR PROJECT

Dear Sir,

25-1

Many of us tax paying citizens that access the I-15 were in ytraffic jams communiting from LA and could not attend your meeting in Rancho Cucamonga. Please no toll roads. Most of us cannot afford to pay the tolls and like the Corona tolls roads, they will be empty. Toll roads help no one. Get real and speak to the hard working commuters.

Sent from Yahoo Mail on Android

Thank you for your comment.

25-1 The Express Lanes are anticipated to provide reliable travel and improve traffic conditions in the GP lanes. For more information on the traffic operational improvements within the project limits, please see Master Response MR 1 Express Lanes Operational Improvements. Regarding the option of using the Express Lanes, please see MR 2 Express Lanes Funding and Cost to Users.

Comment 26: Department of Toxic Substances Control



March 7, 2018

Mr. James Shankel
Senior Environmental Planner
California Department of Transportation, District 8
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
James.shankel@dot.ca.gov

INITIAL STUDY AND PROPOSED MITIGATED NEGATIVE DECLARATION (ND)
FOR THE INTERSTATE 15 CORRIDOR (SCH# 2018021044)

Dear Mr. Shankel:

The Department of Toxic Substances Control (DTSC) has reviewed the subject ND. The following project description is stated in the ND: "The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to construct one to two tolled express lanes along Interstate 15 (I-15) through the cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana in Riverside and San Bernardino counties, California."

Based on the review of the submitted document DTSC has the following comments:

- 26-1 1. The ND should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances, if there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction.
- 26-2 2. If the site was used for agricultural or related activities, residual pesticides may be present in onsite soil. DTSC recommends investigation and mitigation, as necessary, to address potential impact to human health and environment from residual pesticides.

26-1 The topic of current or historic uses in the project area that may have resulted in any release of hazardous waste/substance identified in the June 2016 *I-15 CP Initial Site Assessment*. Subsequently the April 2017 *I-15 CP Hazardous Materials Survey*, and the June 2017 *I-15 CP Site Investigation and Aerially Deposited Lead Survey* were prepared for the project. Investigation and sampling were conducted according to current state and federal regulations. Sample testing was performed by certified and accredited laboratories. Current and historic uses of the project site were addressed in the Hazardous Waste/Materials Section 2.2.5.2 of this Environmental Document. Results and recommendations of the surveys are also provided in this section. Hazardous material such as asbestos, lead-based paint, and hazardous material associated with a railroad site may be encountered during the construction activities within the project limits. Work that affects hazardous materials in the project area will be conducted according to Standard Specifications in compliance with the most recent applicable federal, state, and local regulations, standards, and codes for government abatement/remedial actions, transport, and disposal, and will be coordinated with the applicable regulatory agency. Hazardous Waste/ Materials Section 2.2.5.3 indicates that the project does not include or result in Hazardous Waste/ Material impacts from the project operation.

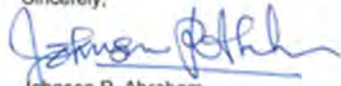
Comment 26: Department of Toxic Substances Control

Mr. James Shankel
March 7, 2018
Page 2

- 26-3 3. The ND states, "The observed transformers are reportedly owned and operated by SCE, and as such, it would accept responsibility for cleanup from leakage, repair, or replacement activities. Given the utility ownership and observed conditions, the electrical transformers are not considered to represent a likely past, present, or material threat of release, nor do they represent a recognized environmental condition to the property at this time." DTSC recommends evaluation, proper investigation and mitigation, if necessary, on onsite areas with current or historic PCB-containing transformers.
- 26-4 4. Section 2.2.5.2 of the ND indicates that the detected concentrations of contaminants from the project area were compared with their corresponding commercial/industrial Regional Screening Levels (RSLs). DTSC recommends placement of land use restrictions if the properties are not remediated to levels commensurate with unrestricted land use (residential use).
- 26-5 5. Excavated soil should be sampled prior to export/disposal and disposed of properly in accordance with all applicable and relevant laws and regulations. In addition, if the project proposes to import soil to backfill the excavated areas, proper evaluation and/or sampling should be conducted to make sure that the imported soil is free of contamination.
- 26-6 6. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the ND should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight.

If you have any questions regarding this letter, please contact me at (714) 484-5380 or by email at Johnson.Abraham@dtsc.ca.gov.

Sincerely,



Johnson P. Abraham
Project Manager
Brownfields Restoration and School Evaluation Branch
Site Mitigation and Restoration Program - Cypress

kl/sh/ja

cc: See next page.

In addition, a soil management plan will be prepared and implemented according to DTSC guidance to address arsenic impacts identified within the railroad site in the project area.

- 26-2 As discussed in the Environmental Document Hazardous Waste/Material Sections 2.2.5.2, and 2.2.5.3, The *Site Investigation and Aerially Deposited Lead Survey* that was performed for the project included the investigation resulting from hazardous material present in agriculture and related activities. Soil samples were collected from areas of former agricultural sites within the project area, and tested for residual Organochlorine Pesticides (OCPs). The concentration of material detected was determined to be below the EPA screening levels; therefore, the project alignment is not impacted by the former agricultural activities or residual Organochlorine Pesticides, (OCPs). No avoidance, minimization, or mitigation measures related to hazardous material associated with agricultural activities are required.
- 26-3 The referenced transformers in Hazardous Waste/Material Section 2.2.5.2 of this Environmental Document were found to be located on adjacent properties outside of the project area. There are no current or historic on-site PCB-containing transformers within the project limits.
- 26-4 Based on the analysis provided in Hazardous Waste/Materials Section 2.2.5.3, it was determined that most investigated contaminants were found to be below residential health risk levels.

Comment 26: Department of Toxic Substances Control

Mr. James Shankel
March 7, 2018
Page 3

cc: Mr. Tim Watkins (via e-mail)
Chief of Legislative and Public Affairs
San Bernardino County Transportation Authority
Twatkins@gosbcta.gov

Mr. David Bricker (via e-mail)
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation
David.Bricker@dot.ca.gov

Governor's Office of Planning and Research (via e-mail)
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
State.clearinghouse@opr.ca.gov

Mr. Dave Kereazis (via e-mail)
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Mr. Shahir Haddad, Chief (via e-mail)
Brownfields Restoration and School Evaluation Branch
Site Mitigation and Restoration Program - Cypress
Shahir.Haddad@dtsc.ca.gov

CEQA# 2018021044

Contaminants that were found to be at a potentially hazardous level, including lead, asbestos, and arsenic, will be removed from the project site prior to construction. Work that affects hazardous materials identified in the project area will be conducted according to standard specifications in compliance with the most recent applicable federal, state, and local regulations, standards, and codes for government abatement/remedial actions, transport, and disposal, and will be coordinated with the applicable regulatory agency.

Standard specifications regarding the management of asbestos and lead based material are identified in Project Description Section 1.6 under the "Other Provisions" sub-heading. In addition, Hazardous Waste/Materials Section 2.2.5.4 identifies the additional measure HAZ-1 that requires a soil management plan to be prepared and implemented according to DTSC guidance to address arsenic impacts identified within the railroad site in the project area. The soil management plan should consist of segregation and stockpiling of soils excavated between 1.0 and 5.0 feet below ground level in the vicinity of the Etiwanda Overhead, waste profile sampling of segregated soils, and, if necessary disposal of arsenic impacted soil at an approved disposal facility.

With the implementation of these measures, it is not anticipated that the project would result in impacts related to hazardous material and hazardous waste from the construction activities of

Comment 26: Department of Toxic Substances Control

the project. Placement of land use restrictions are not required for the site.

26-5 Based on the result of the statistical analysis of the sampling data for the site, the soils are considered non-hazardous with the exception of soils located beneath the Etiwanda Overhead. Hazardous Waste/Material Section 2.2.5.4 of this Environmental Document includes Measure HAZ-1 that requires the project to prepare and implement a soil management plan to address the arsenic contamination identified beneath the Etiwanda Overhead. The soil management plan will include segregation and stockpiling of soils excavated between 1.0 and 5.0 feet below ground level in the vicinity of the Etiwanda Overhead, waste profile sampling of segregated soils, and, if necessary, disposal of arsenic impacted soil at an approved disposal facility.

Borrow/fill sites are typically identified by the contractor retained for the project. The contractor would determine borrow/fill sites for the proposed project and will be responsible for compliance with environmental requirements for the import of borrow material and/or disposal of excess material. The contractor would be responsible for ensuring that all import material comes from permitted commercial material providers and does not contain hazardous materials.

26-6 If contaminated material is found during construction or demolition the soil will be

Comment 26: Department of Toxic Substances Control	
	excavated, segregated, profiled for disposal, and disposed of in accordance with applicable laws and regulations. The soil will not be reused on the site. A soil contingency plan will be provided by the contractor prior to the start of work.

Comment 27: Metropolitan Water District

March 7, 2018

Via E-Mail
Ref: Substructures Job No. 2002-15-011

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor MS 827
San Bernardino CA 92401-1401
Email: james.shankel@dot.ca.gov

Dear Mr. Shankel:

Notice of Intent to Adopt an Initial Study with Proposed Mitigated Negative
Declaration/Environmental Assessment for the Interstate 15 Corridor Project

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Notice
of Intent to Adopt an Initial Study with Proposed Mitigated Negative Declaration/Environmental
Assessment for the Interstate 15 Corridor Project.

- 27-1 Metropolitan owns and operates facilities within and adjacent to the proposed Project limits. As indicated in our attached letter, dated May 14, 2015 our 12-foot-8-inch-inside-diameter Upper Feeder pipeline and 40-foot-wide permanent easement crosses the State Route 15 freeway generally north of 6th Street, our 12-foot by 12-foot and transition into double 10-foot by 6-inch Etiwanda Emergency Discharge pipeline and 30 and 50-foot-wide permanent easement are located generally east of the State Route 15 freeway and located in Arrow Highway and our 96-inch-inside-diameter Rialto Pipeline and 80-foot-wide fee property cross the State Route 15 freeway generally south of Starling Street, all within your project area.
- 27-2 Metropolitan must be allowed to maintain its rights-of-way and access to its facilities and properties at all times, in order to repair and maintain the current condition of those facilities. In order to avoid potential conflicts with Metropolitan's rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Metropolitan will not permit procedures that could subject the pipes to excessive vehicle, impact or vibratory loads. Any future design plans associated with this project should be submitted to the attention of Metropolitan's Substructures Team. Approval of subsequent projects should be contingent on Metropolitan's approval of design plans for portions of the proposed project that could impact its facilities. Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by contacting Metropolitan's Substructures Team at (213) 217-7663 or by emailing

700 N. Alameda Street, Los Angeles, California 90012 • Mailing Address: Box 54153, Los Angeles, California 90054-0153 • Telephone (213) 217-6000

27-1 It is recognized in Utilities/Emergency Services Affected Environment Section 2.1.8.1 of the Environmental Document that the Metropolitan Water District of Southern California (MWD) owns and operates reclaimed water facilities within the project area. Even though both the Upper Feeder pipeline and the Rialto Pipeline cross the I-15 facility within the project area, the project construction does not conflict with the pipelines and neither pipelines will be affected by the project construction activities. The Etiwanda Emergency Discharge pipeline is outside the project limits and will not be affected by construction activities of the project.

27-2 It is expected that the project will not conflict with the MWD pipelines that exist within the project limits, and they will not require relocation or an action to protect in place. All utility relocations would be planned and implemented in coordination with and with the approval of the utility providers. Coordination with MWD will occur during the Design-Build phase as applicable in conjunction with development of any part of the project that may affect MWD's pipelines.

<p>Comment 27: Metropolitan Water District</p>	
<p>THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA</p> <p>James Shankel, Senior Environmental Planner Page 2 March 7, 2018</p> <p>EngineeringSubstructures@mwdh2o.com. Please note that Metropolitan's facilities and rights-of-way must be fully shown and identified as Metropolitan's on all designs or plans submitted.</p> <p>27-3 It will be necessary for the San Bernardino County Transportation Authority (SBCTA) and the California Department of Transportation (Caltrans) to consider Metropolitan's Upper Feeder, Etiwanda Emergency Discharge and Rialto Pipeline in its Project planning. Metropolitan requests that the SBCTA and Caltrans avoid any potential impacts that may occur to Metropolitan's Upper Feeder, Etiwanda Emergency Discharge and Rialto Pipeline due to implementation of the proposed Project or, where applicable, propose mitigation measures to offset any potential impacts.</p> <p>27-4 Metropolitan encourages projects within its service area to include water conservation measures. While Metropolitan continues to build new supplies and develop means for more efficient use of current resources, projected population and economic growth will increase demands on the current system. Water conservation, reclaimed water use, stormwater use, and groundwater recharge programs are integral components to regional water supply planning. Metropolitan supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, irrigation with stormwater and reclaimed water to offset any increase in water use associated with the proposed Project.</p> <p>We appreciate the opportunity to provide input to your planning process and we look forward to receiving future plans and documentation for this project. If we can be of further assistance, please contact Vikki Dee Bradshaw at (213) 217-6028.</p> <p>Very truly yours,</p> <p><i>Vikki Dee Bradshaw</i></p> <p>Vikki Dee Bradshaw Team Manager, Environmental Planning Section</p> <p>VDB/vdb (Share Point/California Department of Transportation Interstate 15 Corridor Project)</p> <p>Enclosures:</p> <p>Metropolitan Substructure Letter, dated May 14, 2015</p>	<p>27-3 Utilities/Emergency Services Section 2.1.8.2 of the Environmental Document indicates that based on the preliminary design plans, the project would not affect the MWD's facilities. However, SBCTA and Caltrans will coordinate with MWD if it is determined during the Design-Build phase that the facilities could be affected by the project.</p> <p>27-4 The importance of water conservation measures such as the use of drought-tolerant landscaping and the use of reclaimed water for irrigation is well recognized and supported. The project implements Caltrans Standard Plans and Specifications regarding the use of these measures to minimize any increase in water use associated with landscaping required for the project.</p>

Comment 27: Metropolitan Water District

Your Project No. EA 08-0R800
MWD Upper Feeder
Sta. 1132+00 to 1153+00
MWD Etiwanda Emergency Discharge
Sta. 32+00 to 52+00
MWD Rialto Pipeline
Sta. 3626+00 to 3649+00
Substr. Job No. 2002-15-011

May 14, 2015

Mr. Joseph Sawtelle, P.E.
TransSystems
6 Hutton Centre Drive
Suite 1250
Santa Ana, CA 92707

Dear Mr. Sawtelle:

Interstate 15 Corridor Project

Thank you for your email dated May 5, 2014, and maps showing the location of the San Bernardino Associated Governments' (SANBAG) Interstate 15 corridor high occupancy vehicle lanes construction project from the State Route 60 freeway to the State Route 210 freeway in the cities of Jurupa Valley, Ontario, Rancho Cucamonga, Fontana and Rialto.

As shown on the enclosed maps, our 12-foot-8-inch-inside-diameter Upper Feeder pipeline and accompanying 40-foot-wide permanent easement crosses the State Route 15 freeway generally north of 6th Street, our 12-foot by 12-foot and transition into double 10-foot by 6-inch Etiwanda Emergency Discharge pipeline and 30 and 50-foot-wide permanent easement are located generally east of the State Route 15 freeway and located in Arrow Highway and our 96-inch-inside-diameter Rialto Pipeline and 80-foot-wide fee property cross the State Route 15 freeway generally south of Starling Street, all within your project area.

700 N. Alameda Street, Los Angeles, California 90012 • Mailing Address: Box 54153, Los Angeles, California 90054-0153 • Telephone (213) 217-4800

Comment 27: Metropolitan Water District

Mr. Joseph Sawtelle
Page 2
May 14, 2015

We are transmitting a copy of our "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California," and are enclosing prints of our Drawings B-21322 through B-21324, B-35978 through B-35980, and B-56441 through B-56443 and Right-of-Way Maps 1402-4 and -5, 1606-24, 1607-7 (Sheet 2 of 2) and 1607-8 (Sheet 1 of 2), for your information and use.

We request that our facilities, and right-of-way be fully shown and identified as Metropolitan's on your project plans and that prints of the preliminary plans be submitted for our review and written approval as they pertain to our facilities. All applicable portions of the enclosed guidelines should be incorporated into your plans.

We also request that a stipulation be added to your plans and/or specifications to notify Jesse Franco of our Water System Operations Group, telephone (909) 392-7184 or cell phone (818) 468-5188, at least two working days prior to starting any work in the vicinity of our facilities.

For any further correspondence with Metropolitan relating to this project, please make reference to the Substructures Job Number shown in the upper right-hand corner of this letter. Should you require any additional information, please contact Kathy Meyer at (213) 217-7663.

Very truly yours,



Ken Chung
Substructures Team

/km
DOC#: 2002-15-011

Enclosures (16)

Comment 28: Mike Rossiter

From: Mike Rossiter [mailto:mikrossiter2445@aol.com]
 Sent: Thursday, March 8, 2018 1:59 PM
 To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
 Cc: grammyj4t@aol.com; janicejreed@gmail.com; glennstull@gmail.com
 Subject: Tool Road Lanes I-15 Freeway

To Whom this Concerns;

Mr. James Shankel

Dear Sir,

Regarding the "TOLL Lanes" on the I-15 Freeway

Toll lanes on the 15 freeway, is / are,

1. first and foremost, double taxation (call it a fee, if it makes you feel better). WE, the Taxpayers already pay for roads, etc, with the Gas Tax, Now thanks to Governor Brown and a runaway state legislature, we now have an even Higher GAS TAX.

Which, Said Gas Tax, Will be increasing each and every year. So not only in effect but in actuality we are paying twice for the same service & usage.

2. The California highway system is maintained by cal-trans, a government agency, that will definitely be involved in the building and maintenance of the same toll road. And we already know who pays Cal Trans wages & benefits; Those very same Taxpayers, whom the "Bleed you Dry" State Legislature and our "Out of Control Governor" want to bleed dry of every penny, in our pockets.

3. The term "Freeway", takes on an entirely different meaning don't you think?

Please re-think this.

Sincerely

Mike Rossiter,
 1391 Quince St., Beaumont Ca

Thank you for your comment.

28-1 The Express Lanes alternative is the only financially feasible alternative for improvements to the I-15 corridor capable of addressing forecast traffic demands. Please see MR 2 Express Lanes Funding and Cost to Users for details on the project funding information.

Caltrans and SBCTA are dedicated to providing a safe, sustainable, integrated, and efficient transportation system, and are at the same time dedicated to being responsible stewards for the public. AB 194 authorized a regional transportation agency such as SBCTA or Caltrans to develop, issue bonds for funding the construction, and to operate toll facilities. SBCTA developed the I-15 CP project, and will be responsible for construction, operation, and maintenance of the Express Lanes.

Comment 29: Native American Heritage Commission

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-6471

Edmund G. Brown Jr., Governor



March 12, 2018

James Shankel, Senior Environmental Planner
California Department of Transportation, District 6
464 West 4th Street, 6th Floor, MS-827
San Bernardino, CA 92401-1400

Sent via e-mail: james.shankel@dot.ca.gov

Re: SCH# 2018021044, Interstate 15 Corridor Project, Communities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana; San Bernardino County, California

Dear Mr. Shankel:

The Native American Heritage Commission (NAHC) has reviewed the Mitigated Negative Declaration (MND) prepared for the project referenced above. The review included the Proposed Program and Project Description; the Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures, section 2.1.11, Cultural Resources; and CEQA Checklist, section V, Cultural Resources and section XVI, Tribal Cultural Resources, prepared by the California Department of Transportation, District 6. We have the following concerns:

- 29-1 1. Input from tribes during consultation is not included in the proposed mitigation measures for Cultural Resources or Tribal Cultural Resources. Two tribes specifically requested Native American monitoring due to the sensitive nature of the proposed project site. The use of the "Gary Winters Memo" form 2003 (not included in the document) as justification for not including tribal recommendations is not sufficient. That document is out-of-date, and requests to provide the document for NAHC review have gone unanswered.
- 29-2 2. Although stop work for finds of remains provisions are included in the narrative, mitigation for inadvertent finds of Archaeological Resources, Cultural Resources, Tribal Cultural Resources, or Human Remains is missing or incomplete. Standard mitigation measures should be included in the document. Please refer to Health and Safety Code § 7050.5 and Public Resources Code § 5097.98 for the process for inadvertent finds of human remains. For sample mitigation measures for Tribal Cultural Resources, please refer to California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form." <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>

Please contact me at gayle.totton@nahc.ca.gov or call (916) 373-3714 if you have any questions.

Sincerely,

Gayle Totton
Gayle Totton, B.S., M.A., Ph.D.
Associate Governmental Project Analyst

Attachment

cc: State Clearinghouse

29-1 In the case of the Interstate-15 Corridor Project, none of the 3 criteria are met that would justify Native American monitoring of the proposed construction. That is, no archaeological excavations are proposed, there are no known Native American archaeological or cultural sites or ESAs, and there is no indication that any buried deposits are present.

Joseph Ontiveros, Cultural Resources Director of the Soboba Band of Luiseno Indians, indicated that the Soboba Band had no specific concerns about the project, but requested Native American monitoring during ground disturbance and archaeological work. Caltrans responded by letter to Mr. Ontiveros on April 5, 2017. This letter cited the Gary Winters (2003) memo which is seen as a Caltrans policy, and explains why Caltrans does not support Native American monitoring for this project.

Andrew Salas, Chairperson of the Gabrielino Band of Mission Indians-Kizh Nation, replied by letter on February 29, 2016. Mr. Salas indicated the areas was sensitive for his tribe, and requested that a Native American monitor be on-site during all ground-disturbing activities to protect cultural resources that might be discovered during construction. Caltrans responded by letter to Mr. Salas on April 5, 2017. This letter cited the Gary Winters (2003) memo and stated that Caltrans does not support Native American monitoring for this project.

Comment 29: Native American Heritage Commission

ADDITIONAL INFORMATION

The California Environmental Quality Act (CEQA)¹, specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.² If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.³ In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).⁴ AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015. AB 52 created a separate category for "tribal cultural resources", that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."⁵ Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.⁷ Your project may also be subject to Senate Bill 18 (SB 18) (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. Both SB 18 and AB 52 have tribal consultation requirements. Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966⁸ may also apply.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>. Additional information regarding AB 52 can be found online at: http://nahc.ca.gov/nrm-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices".

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Pertinent Statutory Information:

Under AB 52:

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.

A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project,⁹ and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18)."¹⁰

The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects.¹¹

1. The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.

¹ Pub. Resources Code § 21000 et seq.

² Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)

³ Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd (a)(1); CEQA Guidelines § 15064 (a)(1)

⁴ Government Code 65352.3

⁵ Pub. Resources Code § 21074

⁶ Pub. Resources Code § 21084.2

⁷ Pub. Resources Code § 21084.3 (a)

⁸ 164 U.S.C. 300101, 36 C.F.R. § 800 et seq.

⁹ Pub. Resources Code § 21080.3.1, subd. (d) and (e)

¹⁰ Pub. Resources Code § 21080.3.1 (d)

¹¹ Pub. Resources Code § 21080.3.2 (a)

The Gary Winters memo of 2003 clarified the policy, practice, and expectations for Native American monitors on projects developed by the California Department of Transportation, and Caltrans relies on the memo principles in providing response to the requests made during the consultation with the tribes. The memo states, in part:

“The Department’s policy and practice is to have Native American monitoring in three circumstances: (1) during archaeological excavations, (2) during construction and construction-related activities adjacent to known Native American archaeological or cultural sites, or such sites identified as Environmentally Sensitive Areas (ESAs), and (3) during construction or related activities where there is a high probability that there may be a buried deposit based on the geomorphology of the area.”

29-2 The project will implement the standard measures for complying with California Public Resources Code (P.R.C.) Section 5097.98 and Health and Safety Code (H.S.C.) 7050.5-7055 (Discovery of Human Remains).

The measures require that if cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

Comment 29: Native American Heritage Commission

c. Significance of the project's impacts on tribal cultural resources.
If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.¹²
With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.¹³
If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss both of the following:**
a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.¹⁴
Consultation with a tribe shall be considered concluded when either of the following occurs:
a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.¹⁵
Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.¹⁶
If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b).**¹⁷
An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.¹⁸
This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:
Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5091.993 of the Public Resources Code.

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/dcca/09_14_05_Updated_Guidelines_922.pdf
- **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**¹⁹
- **There is no Statutory Time Limit on Tribal Consultation under the law.**

¹² Pub. Resources Code § 21080.3.2 (a)
¹³ Pub. Resources Code § 21082.3 (c)(1)
¹⁴ Pub. Resources Code § 21082.3 (b)
¹⁵ Pub. Resources Code § 21080.3.2 (b)
¹⁶ Pub. Resources Code § 21082.3 (a)
¹⁷ Pub. Resources Code § 21082.3 (a)
¹⁸ Pub. Resources Code § 21082.3 (d)
¹⁹ Gov. Code § 65352.3 (a)(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 will be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Andrew Walters, Branch Chief, Environmental Support – Cultural Studies, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

These measures are specified in Cultural Resources Section 2.1.11.3, of the Environmental Document, and also Section 1.6 Project Description under the "Other Provisions" subheading.

Comment 29: Native American Heritage Commission

- **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research,²⁰ the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.²¹
- **Conclusion Tribal Consultation:** Consultation should be concluded at the point in which:
 - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.²²

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
 - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
 - The request form can be found at <http://nahc.ca.gov/resources/forms/>.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1066) for an archaeological records search. The records search will determine:
 - If part or the entire APE has been previously surveyed for cultural resources.
 - If any known cultural resources have been already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.²³
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.²⁴

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.²⁵ In areas of identified

²⁰ pursuant to Gov. Code section 65049.2.

²¹ (Gov. Code, § 65052.3 (b)).

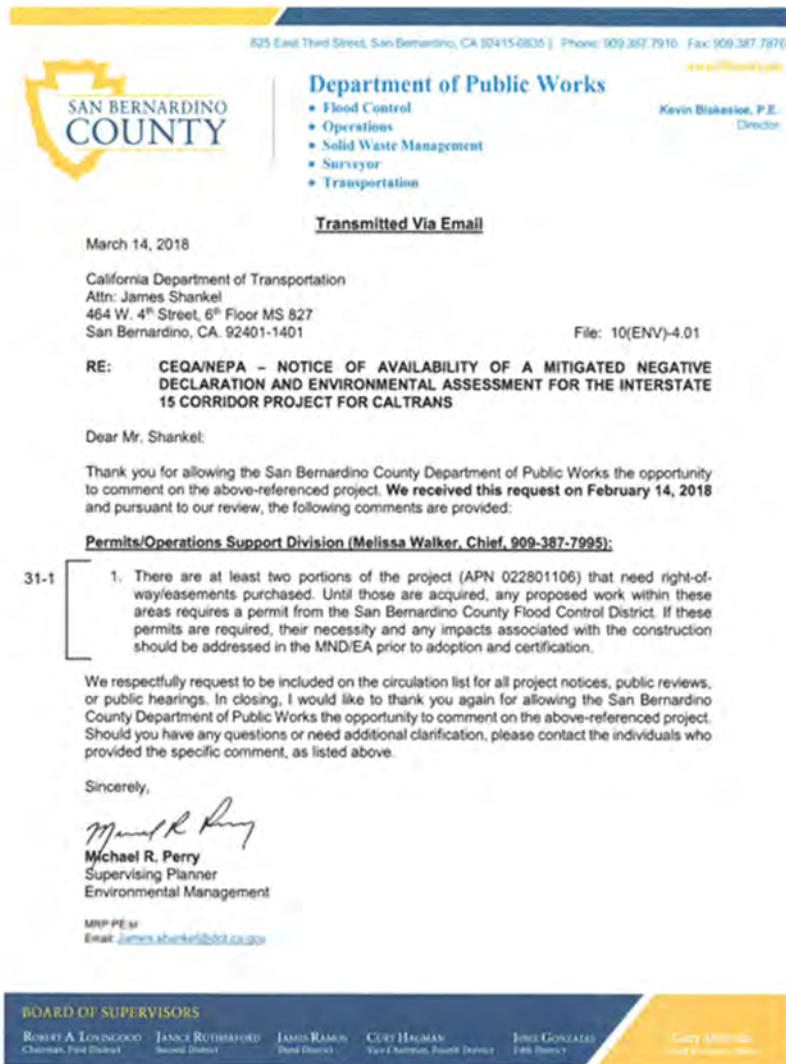
²² (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

²³ (Gov. Code § 615.3 (c)).

²⁴ (Pub. Resources Code § 5097.991).

²⁵ per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).


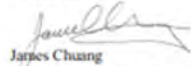
Comment 30: Leopoldo V Alvarado		
30-1	<p>From: alvarado leo [mailto:leov_cs@yahoo.com] Sent: Wednesday, March 14, 2018 4:00 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: Interstate 15 Corridor Project</p> <p>My name is Leopoldo V. Alvarado. I live at 12906 Canopy Ct. in Rancho Cucamonga. I bought this home brand new in August of 2014. I am very unhappy with the excessive noise I experience every day and hour of the day and night. Interstate 15 was built long before my home was built. I believe that the city and the builder, Lennar Homes, pushed the zoning and construction site through without doing appropriate noise studies for the homes built in 2014. I live on the corner of Etiwanda and Church/Miller and the traffic from the freeway and the street creates a noise level that would not pass any study that Cal Trans or the city of Rancho Cucamonga cared to do. I have approached Marc Steinorth and Pete Aguilar and expressed my dissatisfaction to them to no avail. We cannot enjoy our backyard due to the noise level. In addition, we are just a few feet from the actual freeway and without a sound wall or other barrier, it is only a matter of time before a car or truck goes over the side of the freeway onto the street or into my yard and causes significant damage to my property. I am writing to request that a sound wall be built as part of the HOV/Carpool lane construction. I am available by phone at 562-631-8815 or on email at leov_cs@yahoo.com. I would appreciate some kind of communication from you about this matter.</p> <p>Sincerely,</p> <p>Leopoldo V. Alvarado</p>	<p>Thank you for your comment.</p> <p>30-1 The results of the noise modeling conducted in the NSR were included in the Environmental Document, Section 2.2.7. Figure 2.41 sheets 16 and 17 show that Modeled Receptor M-96 includes the property at 12906 Canopy Ct. Noise barriers were modeled at a range of 6 to 14 feet to identify the amount of noise reduction at each modeled receptor. Noise barriers located at the edge of shoulder (EOS) are restricted to a maximum height of 14 feet by the Highway Design Manual (HDM). The HDM in chapter 1102.3 states: “Noise barriers should not exceed 14 feet in height (measured from the pavement surface at the face of the safety shape barrier) when located 15 feet or less from the edge of the traveled way”. Table 2-81 shows that design year noise levels were predicted to be 72 dBA Leq which would approach or exceed the Noise Abatement Criteria (NAC) of 67 dBA Leq (h) at the modeled property. Table 2-81 identified that Barrier S-344 would reduce noise by 3 dB at the referenced property with the inclusion of a 14 foot barrier (S-34).</p> <p>Section 2.2.7.4 Avoidance, Minimization, and/or Abatement Measures does discuss that “Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of a barrier: Noise Barrier S-344 located along the edge of shoulder, with respective length and average heights of 6,480 feet and 14 feet.”</p>

Comment 31: County of San Bernardino Environmental Management Division of Public Works

31-1 Based on the current preliminary design plan, the project would not require right of way from the identified parcel (APN 022801106) for the construction of the project. Bridge widening associated with the project would be constructed outside the boundaries of the County of San Bernardino flood channels. The only parcels that would be potentially affected by the project with respect to temporary and or permanent right of way acquisition are identified in the Relocation and Real Property Acquisition Section 2.1.6 of this Environmental Document.

The project runoff discharge is not expected to result in the modification of, or otherwise alter, the existing storm drain connections to the Flood Control Facilities. This information was documented in a technical memorandum and was provided to the San Bernardino County Flood Control District during the preparation of the technical studies for the Environmental Document. As part of the coordination, the District provided confirmation of the provided information. Water Quality and Storm Water Runoff Section 2.2.2.3, indicates that coordination will continue with the San Bernardino County Flood Control District. If there are any changes during the Design-Build phase of the project development, any applicable coordination will occur, and the project will comply with any San Bernardino County requirements that may be identified at that time.

Comment 32: Southern California Gas Company

<div>  <p>A Sempra Energy utility</p> </div> <div> <p>James Chuang Senior Environmental Specialist Southern California Gas Company Sempra Energy utilities 07024 555 Fifth Street Los Angeles, Ca. 90013 Tel: 213-244-5817 Fax: 323-518-2324</p> </div> <p>03/14/2018</p> <p>Mr. James Shankel Caltrans 464 West 4th Street, 6th Floor, MS 827 San Bernardino, CA 92401</p> <p>Re: Interstate 15 Corridor Project</p> <p>Dear Mr. Shankel:</p> <p>Southern California Gas Company (SoCalGas) appreciates the opportunity to submit comments for the Mitigated Negative Declaration/Environmental Assessment (MND/EA) for the Interstate 15 (I-15) Corridor Project. SoCalGas understands that the proposed project involves construction of tolled Express Lanes in both directions off Interstate 15 (I-15) from approximately 0.3 miles south of Cantu-Galleano Ranch Road in the cities of Eastvale and Jurupa Valley at Post Mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at Post Mile 12.2 in the City of Fontana in San Bernardino County. The project extends for approximately 14.7 miles and would add two Express Lanes in each direction between SR-60 and SR-210, one Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60, and one Express Lane in each direction between SR-210 and Duncan Canyon Road. We respectfully request that the following comments be incorporated in the administrative record.</p> <div> <p>32-1 SoCalGas has several 36-inch high pressure transmission pipelines that both run along and cross underneath the segment of the I-15 freeway within the project area. Specifically, the transmission lines cross under the freeway at Philadelphia Avenue and at Arrow Highway. In addition, SoCalGas has many distribution pipelines that service residential and commercial uses adjacent to this segment of the freeway.</p> <p>32-2 SoCalGas recommends that the project proponent call Underground Service Alert at 811 at least two business days prior to performing any excavation work for the proposed project. Underground Service Alert will coordinate with SoCalGas and other Utility owners in the area to mark the locations of buried utility-owned lines.</p> <p>32-3 Should it be determined that the proposed project may require SoCalGas to abandon and/or relocate or otherwise modify any portion of its existing natural gas lines, SoCalGas respectfully requests that California Department of Transportation coordinate with us by 800) 427-2000 for Non-residential to follow-up on this matter.</p> </div> <p>Once again, we appreciate the opportunity to submit comments for the MND/EA for the Interstate 15 Corridor Project. If you have any questions, please feel free to contact SoCalGas Environmental Review at Envreview@semprautilities.com.</p> <p>Sincerely,</p> <div>  <p>James Chuang Senior Environmental Specialist Southern California Gas Company</p> </div>	<p>32-1 Gas pipelines owned by the Southern California Gas Company are identified as present within the I-15 Corridor Project limits in Utilities/Emergency Services Section 2.1.8.1 of the Environmental Document. Although these pipelines are within project limits, the work at Arrow Highway is not anticipated to conflict with or affect the gas pipeline. There will be no work associated with the construction of this project in the area of the gas pipeline crossing at Philadelphia Avenue location.</p> <p>32-2 As noted in Utilities/Emergency Services Section 2.1.8.2 of the Environmental Document, all utility investigation and relocations would be planned and implemented in coordination with the utility providers. Prior to construction activities, the Design-Builder will identify all utilities located within or near the planned right of way limits. SBCTA will coordinate with the owner of utilities for any investigation work to mark the locations of buried utility lines within the project area. The Design- Builder will identify and provide all required details for any additional utilities that may be affected, as well as, coordinate final design for work that may be required as related to the affected utilities.</p> <p>32-3 The gas pipelines at Philadelphia Avenue and Arrow Highway are not affected by the project. However, if it is known that there is a design change, SBCTA will coordinate with Southern California Gas Company.</p>
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Comment 33: South Coast Air Quality Management District

South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL AND USPS:

March 15, 2018

James.shankel@dot.ca.gov

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor MS 827
San Bernardino, CA 92401-1401

Mitigated Negative Declaration (MND) for the Interstate 15 Corridor Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final MND.

SCAQMD Staff's Summary of Project Description

The Lead Agency proposes to construct tolled express lanes on a 14.7-mile segment of Interstate 15 (I-15) between Cantu-Galleano Ranch Road and Duncan Canyon Road (Proposed Project). Specifically, the Proposed Project will include:

- Two Express Lanes in each direction between State Route (SR)-60 and SR-210;
- One Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 at the southerly end;
- One Express Lane in each direction between SR-210 and Duncan Canyon Road at the northerly end;
- One Auxiliary Lane in each direction between SR-60 and I-10; and
- One Auxiliary Lane in the NB direction between Fourth Street and Foothill Boulevard¹.

Based on a review of Figure 1-5, *Location of Access and Egress Points*, in the MND and aerial photographs, SCAQMD staff found that sensitive receptors such as residential uses are located in proximity to the Proposed Project. The Proposed Project is expected to be constructed over a 36-month period, and construction phases would be sequential and would not overlap².

SCAQMD Staff's Summary of Air Quality Analysis

In the Air Quality Analysis Section, the Lead Agency quantified the Proposed Project's construction emissions. However, the Lead Agency did not conduct a localized air quality analysis, operational emissions analysis, or a mobile source Health Risk Assessment (HRA). Detailed comments are included in the attachment. The attachment also includes SCAQMD staff's recommendations on additional mitigation measures to further reduce construction emissions from NO_x, PM₁₀, and PM_{2.5} and health impacts to sensitive receptors. Finally, the attachment recommends a discussion on how the Proposed Project will comply with SCAQMD Rule 403(e) – Additional Requirements for Large Operations.

Closing

Pursuant to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the MND for adoption together with any comments received during the public review

¹ MND, Pages 1-18 to 19.

² MND, Page 2-304.

Comment 33: South Coast Air Quality Management District

James Shankel

March 15, 2018

process. Please provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When responding to issues raised in the comments, response should provide sufficient details giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful or useful to decision makers and to the public who are interested in the Proposed Project.

SCAQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact me at lsun@aqmd.gov if you have any questions.

Sincerely,

Lijin Sun

Lijin Sun, J.D.

Program Supervisor, CEQA IGR

Planning, Rule Development & Area Sources

Attachment

LS

RVC180220-01

Control Number

Comment 33: South Coast Air Quality Management District

James Shankel

March 15, 2018

ATTACHMENTSCAQMD's Air Quality CEQA Thresholds of Significance

1. While CEQA permits a Lead Agency to apply appropriate thresholds to determine the level of significance, the Lead Agency may not apply thresholds in a manner that precludes consideration of substantial evidence demonstrating that there may be a significant effect on the environment. Evaluation of air quality impacts, unlike some other impact areas, easily lends itself to quantification. Not only does quantification make it easier for the public and decision-makers to understand the breadth and depth of the potential air quality impacts, but it also facilitates the identification of mitigation measures required to reduce any significant adverse air quality impacts. SCAQMD's CEQA thresholds of significance for air quality provide a clear quantitative benchmark to determine the significance of a project's air quality impacts. Therefore, for most projects within the SCAQMD, SCAQMD's air quality CEQA thresholds of significance for construction and operation⁷ are used to determine the level of significance of a project's air quality impacts.

33-1

33-1
Cont.

The Lead Agency quantified the maximum construction emissions for the Proposed Project's build alternative in pounds per day⁴ but did not compare those emissions to SCAQMD's air quality CEQA regional significance thresholds to determine the Proposed Project's CEQA impacts⁵. The Lead Agency stated that "thresholds provided for information purposes only. Caltrans has not adopted nor recognize SCAQMD thresholds⁶." Using SCAQMD's CEQA significance thresholds would clearly identify whether the build alternative would result in significant air quality impacts under CEQA, disclose the magnitude of the impacts, facilitate the identification of feasible mitigation measures, and evaluate the level of impacts before and after mitigation measures. Therefore, SCAQMD staff recommends that the Lead Agency compare the build alternative's construction emissions to SCAQMD's regional air quality CEQA significance thresholds in the Final MND to determine the level of significance.

Localized Air Quality Impact Analysis during Construction

2. Air quality impacts from both construction (including demolition, if any) and operation activities should be calculated. For operational air quality impacts, please see Comment No. 3 below. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips).

Based on a review of aerial photographs, SCAQMD staff found that sensitive receptors are located in proximity to the Proposed Project. Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. They include schools, parks and playgrounds, daycare centers, nursing homes, elderly care facilities, hospitals, and residential dwelling units. While the Lead Agency listed SCAQMD air quality localized CEQA significance thresholds for Sensitive Receptor Areas (SRAs) 32 and 33 with one-acre disturbance and a 50-meter receptor distance in Table 2-66⁷, the Lead Agency did not quantify the Proposed Project's localized construction emissions in the MND. Therefore, SCAQMD staff recommends that the Lead Agency quantify the Proposed Project's localized construction emissions and disclose the localized air quality impacts in the Final MND to ensure that any nearby sensitive receptors are not adversely affected by the

³ South Coast Air Quality Management District, March 2015. *SCAQMD Air Quality Significance Thresholds*. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

⁴ MND, Table 2.9.1, Page 2.9-5.

⁵ *Ibid.*

⁶ *Ibid.* Footnote a.

⁷ *Ibid.* Footnote b.

33-1 Project construction and operations emissions are presented alongside SCAQMD thresholds to allow the general public to consider project construction- and operations-period emissions in light of SCAQMD significance thresholds. Project construction emissions and SCAQMD construction thresholds are presented in Table 2-66 in Section 2.2.6.3 of the Air Quality Section of the Environmental Document. By presenting the SCAQMD significance thresholds alongside project construction and operations emissions, the magnitude of impacts (in comparison to SCAQMD thresholds) is communicated to the general public. Caltrans maintains the ability to identify impacts and feasible mitigation measures without reliance on SCAQMD significance thresholds. Air quality measures for the project were presented in Section 2.2.6.4 of the Environmental Document.

33-2 Table 2-66 in Section 2.2.6.3 shows total construction emissions, which combines on-site (localized) and off-site emissions. Table 2-66 also identifies the SCAQMD localized significance threshold for a 1-acre disturbance and 50-meter receptor distance in the project area. Although Caltrans has not adopted and does not recognize SCAQMD thresholds, the SCAQMD thresholds have been provided in this Environmental Document for informational purposes, and the analysis has been done to ensure that any nearby sensitive receptors are not adversely affected by the construction activities that are occurring in close proximity. Since total emissions (combined on-site and off-site emissions) would not exceed SCAQMD localized emissions

Comment 33: South Coast Air Quality Management District

James Shankel

March 15, 2018

33-2 cont. construction activities that are occurring in close proximity. SCAQMD guidance for performing a localized air quality analysis is available on SCAQMD website⁸.

Operational Air Quality Impact Analysis

33-3 3. The Lead Agency quantified the Proposed Project's construction emissions but did not conduct operational emissions impact analysis. In general, a transportation project that adds more lanes generates or attracts new or additional vehicular trips, which leads to increases in criteria pollutants and air toxics emissions. It can also lead to more dispersed land use development, which in turn leads to additional vehicle travel and increases in criteria pollutants and air toxics emissions. Therefore, SCAQMD staff recommends that the Lead Agency use the good-faith effort to quantify and disclose any potential adverse air quality impacts from additional vehicle travel during implementation of the Proposed Project in the Final MND.

Mobile Source Health Risk Assessment

33-4 4. As stated above, sensitive receptors such as residential dwelling units are located in proximity to the Proposed Project. In the event that the build alternative is approved, its implementation is likely to bring traffic lanes closer to the adjacent sensitive receptors. The annual average daily traffic volume (AADT) for the Riverside County portion of the Proposed Project ranges between 148,000 vehicles to 219,000 vehicles, and the AADT for the Proposed Project's San Bernardino County portion ranges between 127,000 vehicles to 219,000 vehicles⁹. Because of the close proximity to the Proposed Project, existing and future residents would be exposed to diesel particulate matter (DPM), which is a toxic air contaminant and is also determined to be carcinogenic by the California Air Resources Board (CARB). Therefore, SCAQMD staff recommends that the Lead Agency conduct a mobile source health risk assessment (HRA)¹⁰ in the Final MND to disclose the potential health risks to residents from vehicles including DPM-emitting diesel-fueled vehicles that will use the Proposed Project.

Additional Recommended Air Quality Mitigation Measures

33-5 5. CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant adverse impacts. SCAQMD staff recommends incorporating the following mitigation measures in the Final MND to further reduce construction emissions from NOx, PM10, and PM2.5 and health impacts to sensitive receptors.

- a) Require the use of 2010 model year diesel haul trucks that conform to 2010 U.S. EPA truck standards or newer diesel haul trucks (e.g., material delivery trucks and soil import/export) during construction, and if the Lead Agency determines that 2010 model year or newer diesel haul trucks are not feasible, the Lead Agency shall use trucks that meet EPA 2007 model year NOx emissions requirements, at a minimum. Include this requirement as a bid or contract specification with contractors. Require periodic reporting and provision of written documents by contractors to prove and ensure compliance.
- b) Requires the use of Tier 4 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower. Include this requirement as a bid or contract

⁸ South Coast Air Quality Management District. *Localized Significance Thresholds*. Accessed at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>.

⁹ California Department of Transportation. *2016 Traffic Volumes on California State Highways*. Accessed at: http://www.dot.ca.gov/trafficops/census/docs/2016_aadt_volumes.pdf.

¹⁰ South Coast Air Quality Management District. "Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis." Accessed at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>.

thresholds, on-site emissions would not exceed SCAQMD localized emissions thresholds. Because total emissions would be below localized thresholds, no separate presentation of on-site emissions is warranted.

33-3 Operational emissions were quantified and presented in Table 2-62 (Project Area Mobile-Source Emissions) and Table 2-67 (MSAT Emissions) in the Air Quality Section 2.2.6.3 of the Environmental Document. Although Caltrans has not adopted and does not recognize SCAQMD thresholds, the SCAQMD thresholds have been provided in this Environmental Document for informational purposes. Operational criteria pollutant emissions would be below these thresholds. As shown in Table 2-67, operational MSAT emissions would be slightly higher under the Build Alternative for some MSATs when compared to the No Build Alternative, but would be substantially lower at Horizon Year 2045 relative to the Baseline Year 2014. Caltrans relies on the federal Clean Air Act Transportation Conformity process to assess regional and localized impacts related to transportation project improvements. Caltrans confirmed that the project was included in the regional emissions conformity analysis prepared for the SCAG 2016-2040 RTP/SCS and SCAG 2019 FTIP Amendment 1 regional transportation planning documents. The regional conformity discussion is provided in Section 2.2.6.3. To assess project-level (i.e., localized) effects, Caltrans completed the project-level transportation conformity analyses for carbon monoxide (CO) and particulate matter (PM). The project-level conformity discussion is provided in

Comment 33: South Coast Air Quality Management District

James Shankel

March 15, 2018

33-5
cont.

specification with contractors. Require periodic reporting and provisions of written documents by contractors to prove and ensure compliance.

- c) Minimize idling of all construction vehicles to five minutes or less. This is consistent with the CARB's idling policy¹¹.

Compliance with SCAQMD Rule 403(e)

33-6

6. The Lead Agency included a discussion on general compliance with SCAQMD Rule 403 in the MND. Since construction of the Proposed Project would result in an estimated 160 acres of total disturbed soil area¹², the Proposed Project is a large operation in the South Coast Air Basin (50-acre sites or more of disturbed surface area; or daily earth-moving operations of 3,850 cubic yards or more on three days in any year). The Lead Agency is required to comply with SCAQMD Rule 403(e) – Additional Requirements for Large Operations¹³, which includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control in the South Coast Air Basin training class¹⁴. Therefore, SCAQMD recommends that the Lead Agency include a discussion to demonstrate specific compliance with SCAQMD Rule 403(e) in the Final MND. Compliance with SCAQMD Rule 403(e) will further reduce particulate matters from the Proposed Project.

¹¹ California Air Resources Board, June 2009, *Written Idling Policy Guidelines*. Accessed at: <https://www.arb.ca.gov/msprog/ordiesel/guidance/writtenidlingguide.pdf>.

¹² MND, Page 3-17.

¹³ South Coast Air Quality Management District, Rule 403(e), Page 7. Accessed at: <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>.

¹⁴ South Coast Air Quality Management District Compliance and Enforcement Staff's contact information for Rule 403(e) Large Operations is (909) 396-2608 or by e-mail at dustcontrol@aqmd.gov.

Section 2.2.6.3 of this Environmental Document. The conclusion of the regional and project-level transportation conformity analysis is that the proposed project would not cause any new, or worsen any existing, air quality violations.

33-4 Project MSAT emissions, which includes DPM, were quantified and presented in Table 2-67 in Section 2.2.6.3 using daily traffic volume data in the sub-region identified in Figure 2-16 under the Build Alternative and No Build Alternative at Opening Year 2024 and Horizon Year 2045. As shown therein, Horizon Year, daily DPM emissions under the Build Alternative of 1,729 grams would be considerably lower than Baseline Year DPM emissions of 24,261 grams. As such, health risks related to DPM emissions are anticipated to diminish over time when compared to the Baseline/Existing health risk. For this reason, no quantitative HRA is needed, as the existing baseline level of health risk would be substantially reduced over time. Please see the detailed discussion on project MSAT emissions in Section 2.2.6.3 of the Environmental Document, which explains why MSAT emissions are expected to decrease despite projected increases in VMT.

33-5 The air quality analysis presented in the Air Quality Section 2.2.6 of this Environmental Document demonstrates that all air quality impacts would be less than significant with implementation of air quality avoidance/minimization measures identified in Section 2.2.6.4, as well as required compliance provisions related to air quality identified in Section 1.6 of this Environmental Document. Nonetheless, an additional

Comment 33: South Coast Air Quality Management District	
	<p>to further minimize impacts. This measure includes providing School with an advanced notice of construction activity anticipated to occur within 1,000 feet of the school property.</p> <p>33-6 As discussed in Section 2.2.6.3 of the Environmental Document, the project will comply with the Best Available Control Measures requirement of SCAQMD Rule 403, as well as the Rule 403, subsection (e), Additional Requirements for Large Operations.</p>

Comment 34: United State Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

March 15, 2018

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor, MS 827
San Bernardino, California 92401-1400

Subject: Draft Environmental Assessment for the Interstate 15 Corridor Project, Riverside and San Bernardino Counties

Dear Mr. Shankel:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. EPA provides the following recommendations to be considered prior to making a determination regarding the significance of potential impacts from the proposed project. Addressing the recommendations may assist Caltrans in making a determination of a "Finding of No Significant Impact" at the completion of the Environmental Assessment (EA) process. We appreciate the opportunity to review the Draft EA.

The project proposes to construct one to two tolled express lanes along Interstate 15 (I 15) through the cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana in Riverside and San Bernardino Counties. The proposal includes two Express lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Canto Galleano Ranch Road and SR-60 and one Express Lane in each direction between SR 210 and Duncan Canyon Road. This project also proposes to add one Auxiliary Lane in each direction between SR 60 and Interstate 10 (I-10) and one Auxiliary Lane in the northbound direction between Fourth Street and Foothill Boulevard.

Congestion Relief

EPA supports the proposal to provide congestion relief using the existing right of way through the provision of express lanes. The lanes would be part of a network of 20 freeway segments identified in the Southern California Association of Governments 2016 Regional Transportation Plan/Sustainable Communities Strategy as part of the effort to develop an enhanced regional transportation management system.

34-1 Recommendations:

- In support of the goals of congestion relief and transportation management, EPA encourages continued coordination between the San Bernardino County Transportation Authority (SBCTA) and the area transit agencies to explore potential future transit service along the corridor

- 34-1 SBCTA will continue coordination and collaboration efforts with area transit agencies to continue to explore future potential transit services.
- 34-2 Project Description Section 1.6 of the Environmental Document, under Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives indicates that SBCTA is implementing several existing TDM programs and strategies such as the Regional Vanpool Program, and Park and Ride facilities to reduce the number of vehicle trips and vehicle miles traveled, and increase vehicle occupancy. In addition, the project will implement several TSM strategies that improve the operations of the existing lanes to the maximum extent possible, adding HOV lanes at several on-ramps, and constructing Auxiliary Lanes where feasible. The project will incorporate Intelligent Transportation System elements, including closed-circuit television systems for viewing ramps and nearby arterials; and CMS and other signs to improve traveler information systems; and vehicle detection systems for volume, speed, and vehicle classification. Upgraded traffic signals will be interconnected and/or coordinated with adjacent signals and ramp meters as part of this project.
- 34-3 As discussed in the response to the SCAQMD comment 33-4, although local MSAT emissions are predicted to be higher in some areas under the Build Alternative when compared to the No Build Alternative, horizon year MSAT emissions are

Comment 34: United State Environmental Protection Agency

34-2

- We also support inclusion of transportation demand management (TDM) and transportation system management (TSM) strategies in the project to the maximum extent possible to maximize the efficiency of the existing lanes.

Air Quality

Since this project is located on a currently high volume corridor in an area that is designated as extreme nonattainment for ozone and moderate nonattainment for the PM_{2.5} National Ambient Air Quality Standards (NAAQS) as well as maintenance for CO and PM₁₀, it is critically important that impacts to air quality be accurately analyzed, disclosed, and reduced as much as possible.

Recommendations:

34-3

- The document states that under the Build Alternative, there would be localized areas where vehicle miles traveled (VMT) would increase and that localized increases in some mobile source air toxics (MSAT) emissions would likely occur under the Build Alternative when compared to the No Build Alternative. EPA recommends that Caltrans and SBCTA consider additional mitigation to reduce potential impacts to nearby residential areas and sensitive receptors that may be impacted. We support the inclusion of sound walls for noise mitigation, which may also provide mitigation of air quality impacts on sensitive receptors. With regard to statements made in the document regarding air toxics analysis being an emerging field and current scientific techniques, tools, and data not being sufficient to accurately estimate human health effects in a way that would be useful to decision makers, EPA believes that current risk assessment techniques are very useful for decision making purposes. We appreciate our continued discussions with Caltrans regarding how best to use existing and emerging research, techniques, and tools to meet transportation needs while being most protective of human health near high volume roadways.

34-4

- In support of Executive Order 13045 on Children's Health and Safety, we encourage Caltrans to identify any additional mitigation measures to reduce possible impacts to children's health from construction and operation of the Build Alternative, including air quality and noise impacts. Consider the following sources for identifying mitigation measures: EPA's School Siting Guidelines (<http://www.epa.gov/schools/guidelinestools/siting/>), and EPA's Voluntary Guidelines for States: Development and Implementation of a School Environmental Health Program (<http://www.epa.gov/schools/guidelinestools/ehguide/>).

Environmental Justice

The document states that to address equity concerns, SBCTA will create a Low-Income Equity Program, which will include policies to enable low-income households to utilize the proposed project improvements, such as waiving account maintenance fees, allowing the use of cash to open and replenish toll accounts, and/or implementing video license plate recognition as an alternative to toll collection technology.

34-5

Recommendations:

- EPA appreciates the equity analysis performed for the project and supports the inclusion of measures to address equity concerns about the project. We recommend that Caltrans and SBCTA continue to consider these, as well as other measures that may be identified as tolling operations are implemented on this and other corridors, to assist low income users as project construction advances and is ultimately implemented.

predicted to be lower in all areas when compared to the Baseline/Existing condition. This is demonstrated in Air Quality Section 2.2.6, Table 2-67 Comparison of Years 2014 and 2045 MSAT Emissions in Grams per Day. Considering the substantial reduction of MSAT projected to occur due to technological improvements and retirement of older vehicles, no additional measures have been identified and no measures will be implemented. Caltrans will continue to work with USEPA on guidance regarding how to evaluate transportation project MSAT emissions.

34-4 The air quality analysis identified minimization measures presented in Section 2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures. The project will also implement Standard Provisions related to compliance with existing air quality rules and regulations as identified in Project Description Section 1.6 (under "Other Project Provisions") of the Environmental Document. Localized particulate matter (PM) and carbon monoxide (CO) analyses conducted for this project concluded that impacts to local air quality would be less than significant. The local CO and PM analyses are provided in Sections 2.2.6.3 under Localized Carbon Monoxide Hot-Spot Evaluation and Localized PM_{2.5} and PM₁₀ Hot-Spot Evaluation respectively. In addition, the MSAT emissions analysis provided in Section 2.2.6.3 under Mobile Source Air Toxics, shows that all MSAT emissions at horizon 2045 would be less than current baseline levels. The air quality impact

Comment 34: United State Environmental Protection Agency	
	<p>analysis demonstrates that all air quality impacts, including impacts related to children's health and safety, would be less than significant.</p> <p>34-5 Caltrans and SBCTA will continue to consider options that would assist low income users as this project develops.</p>

Comment 35: City of Rancho Cucamonga

<div></div> <div><p>Mayor L. Dennis Michael Mayor Pro Tem Lynne B. Kennedy Council Members William J. Alexander, Sam Spagnolo, Diane Williams City Manager John R. Gillison</p></div> <div><p>CITY OF RANCHO CUCAMONGA</p></div> <div><p>10500 Civic Center Drive P.O. Box 807 Rancho Cucamonga, CA 91729-0807 909.477.2700 www.CityofRC.us</p></div> <p>March 15, 2018</p> <p>James Shankel, Senior Environmental Planner California Department of Transportation 464 West 4th Street, 6th Floor, MS-827 San Bernardino, CA 92401-1400</p> <p>SUBJECT: INTERSTATE 15 CORRIDOR PROJECT- INITIAL STUDY [WITH PROPOSED] MITIGATED NEGATIVE DECLARATION/ENVIRONMENTAL ASSESSMENT</p> <p>Dear Mr. Shankel:</p> <p>Thank you for the opportunity to review and comment on the above referenced Initial Study/Environmental Assessment, which examines the potential environmental impacts associated with the construction of tolled Express Lanes, in both directions, on Interstate 15 within the City of Rancho Cucamonga.</p> <p>Staff has reviewed the document and identified several areas (e.g., short term construction impacts, noise, aesthetics, and landscaping) where the analysis was incomplete and failed to establish appropriate mitigation measures. The City recommends that the Initial Study be revised to address the City's comments that are attached and that the document be recirculated for review.</p> <p>Should you have any questions, please contact Albert Espinoza, Assistant City Engineer at (909) 774-4051, or Tom Grahn, Associate Planner at (909) 774-4312, Monday through Thursday from 7:00 am to 6:00 pm.</p> <p>Sincerely,</p> <div></div> <p>Candyce Burnett City Planner</p> <p>Attachment: Response to Initial Study</p> <p>Cc: John Gillison, City Manager Jason Welday, City Engineer Albert Espinoza, Assistant City Engineer Mike Smith, Senior Planner Tom Grahn, Associate Planner</p>	
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Comment 35: City of Rancho Cucamonga**Chapter 1. Proposed Project****Section 1.4.2.1 Capacity, and Transportation Demand, and Safety**

- 35-1 [• Page 1-14. Bullet point 2 at the top of the paragraph. Add Citizens Bank Arena and LoanMart Field, as special venues in the area which generate high traffic volumes.

Section 1.4.2.2 Social Demands or Economic Development

- 35-2 [• Page 1-16. There is an inaccurate reference to an Equestrian/Rural Overlay District and should be revised to reference the City's Equestrian Overlay District (EOD).

Section 1.6.1.2 Alternative 2 – Build Alternative

- 35-3 [• Page 1-22. Structures. This section needs to address the timing of when and how long structures will be in place that affect the proposed improvements on Fourth Street and Foothill Boulevard.
- 35-4 [• Page 1-22. Right of Way. The second bullet identifies that a Temporary Construction Easement (TCE) may be needed on Rochester Avenue; however, there is no discussion of where the TCE will occur.
- 35-5 [• Page 1-23. Table 1-10 Structures Widening with the Project Limits; Include OH in the abbreviation note at the bottom of the Table.
- 35-6 [• Page 1-24. Utilities. The Rancho Cucamonga Municipal Utility (RCMU) has fiber optic cable within the areas to be disturbed, but the RCMU is not identified as a utility owner within project limits, nor are the areas RCMU fiber optic identified.
- 35-7 [• Page 1-2. Aesthetic and Landscape Features. This analysis is incomplete as it does not address the completion of sound walls with the improvements.
- 35-8 [• Page 1-26. Aesthetic and Landscape Features (and Page 2-286 Affected Environment). These sections discuss segments of the 1-15 identified as Classified Landscaped Freeways and further identifies that sections can be declassified if conditions change so that they no longer meet the Classified Landscaped Freeway criteria. The City of Rancho Cucamonga is opposed to the declassification of any Classified Landscaped Freeway area as it may create areas along the 1-15 where additional freeway directed signage may be installed. Caltrans needs to further discuss with the City the implications of the declassification of any segments identified as Classified Landscaped Freeways.
- 35-9 [• Page 1-26. At the end of the page a sentence reads, "Soffit lighting under the new bridge decking would be provided for pedestrian safety." This is important to the City of Rancho Cucamonga especially at the PE trail.

Exhibit – Alternative 2 (Build Alternative)

- 35-10 [• Page 1-47. Sheet 9 of 22. Where will construction vehicles gain access to the potential construction staging area? Will it be from 4th Street or the on-ramp? If 4th Street is the option, how will this affect traffic on 4th Street?
- 35-11 [• Page 1-49. Sheet 10 of 22 – Change 7th Street to 6th Street.
- 35-12 [• Page 1-84. Construction Closures. Arrow Route would have non-standard vertical clearance due to falsework for the bridge widening, and trucks would be detoured for the

35-1 The listed land uses have been added to Capacity, and Transportation Demand Section 1.4.2.1 of this Environmental Document.

35-2 The reference to the City's Equestrian Overlay District on page 1-16, Section 1.4.2. (under Social Demands or Economic Development) has been corrected.

35-3 The construction schedules for bridge widening and construction of retaining walls are not being prepared during this phase of the project. The construction schedule will be prepared at the Design-Build phase. Impacts related to closures and detours will be coordinated with local agencies including the City of Rancho Cucamonga regarding impacts on local streets such as Fourth Street and Foothill Boulevard, prior to closures pursuant to the I-15 CP TMP.

35-4 To clarify, according to the Project Description Section 1.6, Right of Way subheading, of the Environmental Document, the bullet identifies the required TCE at the Rochester OH, and not Rochester Avenue. The identified location of the staging area is within the railroad right of way limits, and within an area that is leased by the railroad, and owned by SBCTA.

35-5 Table 1-10 has been revised to include OH in the abbreviation note at the bottom of the table.

35-6 The Rancho Cucamonga Municipal Utility (RCMU) was added to the list of companies with utilities within the project limits identified on page

Comment 35: City of Rancho Cucamonga	
<p>35-12 cont. [duration of construction. Arrow route is a heavy truck route and having additional truck traffic on Foothill Boulevard is impactful. City would not support long term detour routes of Arrow Route.</p> <p>35-13 [Page 1-85. Borrow/Fill Sites. The document identifies that a total of 167,530 cubic yards of imported borrow materials will be need for the project, but does not address the effects or number of haul truck imports to the site.</p> <p>Section 1.8 Alternatives Considered but Eliminated from Further Discussion</p> <p>35-14 [Pages 1-88 and 1-89. A precast bridge structure should be considered at Arrow Route to reduce construction activity impacts and not have additional truck traffic on Foothill Boulevard.</p> <p>Chapter 2. Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures</p> <p>Section 2.1.1.1 Existing and Future Land Use</p> <p>35-15 [Page 2-11. Table 2.1 Major Development. Revise table to reflect that Day Creek Square was approved by the Planning Commission in June 2017, and by the City Council in July 2017. The North Eastern Sphere Annexation Proposal is being reevaluated and is anticipated to be scheduled for Planning Commission and City Council during review during the first quarter of 2019.</p> <p>Section 2.1.1.3 Environmental Consequences</p> <p>35-16 [Page 2-27. Permanent. The second paragraph identifies that the project would result in impacts from construction, air pollution, and noise; yet concludes that there would be no impacts without addressing why those impacts are not anticipated to be of a severity such that existing land uses would become incompatible with the proposed improvements. The Initial Study needs to address short term air, noise, and traffic impacts.</p> <p>Section 2.1.1.4 Avoidance, Minimization, and/or Mitigation Measures</p> <p>35-17 [Page 2-43. Table 2-3. Rancho Cucamonga Adult Sports Park; update the two soccer fields to Goals Soccer Center.</p> <p>Section 2.1.2.3 Environmental Consequences</p> <p>35-18 [Page 2-49. Permanent. Address permanent impacts to parks. Although it is anticipated that there will be no impacts to parks, Rancho Cucamonga has four parks/trails within 0.5 miles or less from the 1-15 freeway. It is unknown what the impacts of additional noise and air pollution will have on sensitive receptors.</p> <p>Section 2.1.5.2 Affected Environment</p> <p>35-19 [Page 2-104. Table 2-6. Parks & Recreation and Others, Number 75, Empire Lakes Golf Course is no longer open, please remove.</p> <p>Section 2.1.5.2 Environmental Consequences</p> <p>35-20 [Page 2-114. Build Alternative, Temporary. There should be a discussion or mention of not having consecutive closures occur with adjacent interchanges. If this occurs, detours will become longer than necessary.</p>	<p>1-24, in Section 1.6 of the Environmental Document. Utilities/Emergency. Section 2.1.8.2 identifies the utilities that are known to be affected by the project and require coordination with the utility owner. The RCMU fiber optic cable that exists within the project limits is encased for protection and will not be affected by the project construction activities. Further utility searches will be conducted during the Design-Build process. If other utility conflicts are identified, coordination will be conducted with the affected utility owners. Furthermore, a re-evaluation of the Environmental Document will be performed to identify any potential impacts and additional measures, if needed.</p> <p>35-7 The “Aesthetic and Landscape Features” subheading included on page 1-25 of Chapter 1 indicates that the project would apply aesthetic treatment to structures including soundwalls. The planned noise barriers in the form of sound walls were identified after the protocol survey conducted in April 2018. Table 1-11 in Section 1.6 Project Description was updated in the Final Environmental Document to identify the approved noise barriers.</p> <p>The Visual/Aesthetics, Environmental Consequences Section 2.1.10.4 in the Final Environmental Document has been updated to provide additional analysis specific to the sound walls’ impacts on Key Views. Overall, the revised analysis indicates that the proposed sound walls</p>

Comment 35: City of Rancho Cucamonga

- 35-21 • Page 2-115. Community Character and Cohesion. Similar to the parks discussion on page 2-49 it is unknown how the increase in air pollution and noise will impact the housing market.
- 35-22 • Page 2-115. Economic Conditions. Although it is anticipated that the project will not impact businesses. Rancho Cucamonga major shopping center, Victoria Gardens is located on Foothill Boulevard at the on-ramp. Closures and short-term construction impacts will impact this site. Additionally, the project is forcing an easement on a private property owner CRPT Land Holding, that will impact future redevelopment of the site.
- Section 2.1.6.3 Environmental Consequences**
- 35-23 • Page 2-120. Build Alternative. Permanent. How can the project conclude that a permanent easement on property owned by CPRT Land Holding will have a minimal temporary impact on the business when the easement will result in a permanent impact on redevelopment of the site.
- Section 2.1.7.2 Affected Environment**
- 35-24 • Page 2-131. Third paragraph compares the City of Rancho Cucamonga to the City of Rancho Cucamonga.
- Section 2.1.9.3 Environmental Consequences**
- 35-25 • Page 2-148. Build Alternative, Temporary. There should be a discussion or mention of not having consecutive closures occur with adjacent interchanges. If this occurs, detours will become longer than necessary.
- 35-26 • Page 2-179 & 2-180. Table 2-47. There will be an issue with there not being enough storage once the Foothill Boulevard on-ramp meters are installed. This is a concern for the City of Rancho Cucamonga because Foothill Boulevard will be impacted by the short storage lengths and the proximity to Victoria Gardens will be problematic, especially during the holiday season. NB loop on-ramp from Foothill should remain unmetered per the comments on page 2-181 which states; "However, traffic density in the influence area where the on-ramp traffic merges with mainline traffic would be lower with the project than without it, so there would be less need for metering at this location with the Build Alternative." The City of Rancho Cucamonga would be in favor of not metering NB Foothill Boulevard on-ramps if not necessary.
- Section 2.1.9.4 Avoidance, Minimization, and/or Mitigation Measures**
- 35-27 • Page 2-186. Caltrans – Classified Landscaped Freeway: The sentence reads; "Portions or all of Classified Landscaped Freeway sections can be declassified if conditions have changed such that they no longer meet the criteria listed above. Two segments of I-15 within the project area are Caltrans Classified Landscaped Freeways, according to the list published by Caltrans on October 24, 2016 (Caltrans 2016b). Those segments are Post Mile 5.27 to Post Mile 5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue undercrossing) and Post Mile 7.56 to Post Mile 10.11 (from south of the SR-210 and I-15 interchange, north approximately 2.55 miles to north of the Summit Avenue overcrossing) in San Bernardino County." The City of Rancho Cucamonga would like some clarification if these two segments are being declassified or not.

would not obstruct views of the mountains for the majority of viewers. At Key View 1 and Key View 2, sound walls are not expected to block existing mountain views and, therefore, the visual resource impact assessment levels at these Key Views remain the same. At Key View 3, near Etiwanda Avenue, the sound walls could obstruct views of the mountains for some local residents and drivers along I-15. This obstruction is anticipated to be either partial, or limited to a small number of residents. Therefore, at Key View 3 the sound walls would increase the level of visual resource change to moderate. A moderate resource change with a high viewer response increases the visual impact at Key View 3 to moderate-high from moderate. In addition, measure VA-6 lists soundwalls as one of the structures that will require application of aesthetic treatment by the project.

In addition, Section 2.1.10.5 Avoidance and Minimization Measures was revised to incorporate Measure VA-10, which requires vine planting with irrigation on one or both sides of the sound walls to soften the hard visual appearance of the walls and to deter graffiti.

- 35-8 Information on the Classified Landscape Freeway Segments are included on Page 1-25 of Chapter 1, and page 2-188 of Chapter 2, in the Visual/Aesthetics Section 2.1.10 of the Environmental Document. These two sections indicate that two segments within the project limits are identified as "Classified Landscape Freeway".

Comment 35: City of Rancho Cucamonga**Section 2.1.10.4 Environmental Consequences**

- 35-28
- Page 2-201, Table 2-53. Key Viewpoints Used in the Visual Impact Analysis Number 4. The Build Alternative Project Features for the PE Bike trail does not mention installation of new soffit lighting. As noted on Page 1-26 [42-394] new soffit lighting shall be added under the PE trail "Soffit lighting under the new bridge decking would be provided for pedestrian safety."
 - Page 2-212. Photo-simulation under the PE trail. At night it will be dark under the I-15 bridge which needs to be mitigated. Will the existing freestanding lighting fixture currently situated between NB and SB lanes remain or be removed with the installation of soffit lighting?

Section 2.2.7.3 Environmental Consequences

- 35-29
- Page 2-421. Area E, New noise barriers for these stretches along the I-15. Barrier S-353, Figure 2-41, Sheet 16, Page 2-353 proposes a wall which will affect the visibility of Victoria Gardens and Bass Pro Shop from I-15 as motorist travel southbound. Has this been discussed with Victoria Gardens and Bass Pro Shop? A discussion should occur with these two businesses and see if reducing Barrier S-353 to the northerly property limit would be an option if they do not want to lose visibility from I-15.

Section 2.4.3 Cumulative Impact Analysis

- 35-30
- Page 2-630, Table 2-94. Cumulative Impacts Analysis Projects and Plans List. Update the table as identified:
 - Project Id No. 20 – Day Creek Square was approved by the Planning Commission in June 2017, and by the City Council in July 2017. https://www.cityofrc.us/cityhall/planning/current_projects/day_creek_square/default.asp
 - Project Id No. 21 – The North Eastern Sphere Annexation Proposal is being reevaluated and is anticipated to be scheduled for Planning Commission and City Council during review during the first quarter of 2019. https://www.cityofrc.us/cityhall/planning/current_projects/north_eastern_sphere_annexation_specific_plan/default.asp

Appendix A. Resources Evaluated Relative to the Requirements of Section 4(f)

- 35-31
- Page A-4. First paragraph under Pacific Electric Trail. Rancho Cucamonga's lease for the PE Trail was amended in 2010 for a 20-year initial term, and does not terminate in 2024 as identified.
- 35-32
- Page A-6. The PE Trail, as mentioned in a previous comment; the City strongly feels soffit lighting under the new bridge should be provided for pedestrian safety.

The analysis indicates that only one segment located within Post Mile 5.27/5.99 would potentially be affected by the project. It is also noted that the landscaping within the affected classified freeway segment will be replaced, and the quantity of replacement planting will be calculated to meet the requirements of continuous planting, and thus maintain the classification of the segment. Measure VA-8 is identified to avoid the declassification of Classified Landscape Freeway segments within the project area.

35-9 Coordination with the City of Rancho Cucamonga regarding Caltrans' evaluation and determination with respect to the proposed project's potential to impact to the Pacific Electric Trail began with a meeting with the City of Rancho Cucamonga's Senior Planner, Mike Smith, along with other City staff on Thursday July 6, 2017. A formal letter was transmitted to Mr. Smith on December 4, 2017, which provided a summary of Caltrans' evaluation determination, and measures to address the proposed project in relation to the Pacific Electric Trail. The City requested a revision to the measures pertaining to notification during construction on January 22, 2018. A revised formal letter was transmitted to Mr. Smith on January 22, 2018. The City provided written concurrence on January 23, 2018. A copy of the correspondence is included in Appendix A of this Environmental Document.

As stated in the respected letters to the cities of Fontana and Rancho Cucamonga which the cities

Comment 35: City of Rancho Cucamonga	
	<p>have concurred with, while the new structure between the northbound and the southbound freeways will cover the trail, the freeway bridge is of sufficient height and the overall width of the combined structures is sufficiently limited so that the trail will still experience substantial natural light during daytime, and the performance of existing freestanding night lighting that is already installed along the trail at approximately 150-foot intervals will not be impacted.</p> <p>35-10 The potential construction staging area located between Fourth Street westbound and the Fourth Street southbound on-ramp would be accessed from the on-ramp and would not affect the traffic on Fourth Street. Construction staging areas would be finalized during the design-build phase in coordination with the local jurisdictions.</p> <p>35-11 The street name is revised from Seventh to Sixth on sheet 10 of Figure 1-6.</p> <p>35-12 The proposed project work that would require short duration closures necessitating a proposed temporary detour include removal of a small portion of the existing bridge, construction and/or removal of falsework or placement of pre-cast bridge girders. As described in Section 2.1.9.3 of the Environmental Document, SBCTA and the Design Builder will coordinate with the City of Rancho Cucamonga regarding detours, including truck detours, and roadway closures during the bridge construction, prior to implementation.</p>

Comment 35: City of Rancho Cucamonga	
	<p>35-13 The number and location of haul truck routes are not identified at this point and will be decided at the Design-Build phase. Once the borrow site is identified, the Design-Builder will be required to prepare and submit to Caltrans a plan identifying impacts, and obtaining all required environmental approvals.</p> <p>35-14 A pre-cast bridge structure will be considered as an option. The final determination regarding bridge structure type for all locations within the project will be made during the Design-Build phase of the project.</p> <p>35-15 Table 2-1, Major Developments Within the Study Area, has been updated with the information provided.</p> <p>35-16 The referenced Section 2.1.1.3 Environmental Consequences acknowledges that the project impacts could involve increased air pollution and noise from the addition of traffic lanes will occur, but incorrectly stated that construction impacts would occur as part of the project's permanent impacts. Following the completion of construction activities, construction would not be a permanent effect of the project.</p> <p>Operational impacts related to air quality are identified in Table 2-62 (Criteria Pollutants) and 2-67 (MSAT Emissions) in Section 2.2.6. Although Caltrans has not adopted and does not recognize SCAQMD thresholds, the SCAQMD thresholds have been provided in this Environmental</p>

Comment 35: City of Rancho Cucamonga

Document for informational purposes. Operational criteria pollutant emissions would be below these thresholds. As shown in Table 2-67, operational MSAT emissions would be slightly higher under the Build Alternative for some MSATs when compared to the No Build Alternative, but would be substantially lower at Horizon Year 2045 relative to the Baseline Year 2014.

As discussed in Section 2.2.7, the preparation of the NSR requires analysis of land uses along the project alignment with the emphasis on land uses which would benefit from a reduced noise level. (generally, areas where people are present for extended periods of time such as backyards or playgrounds). The NSR modeled and analyzed 306 modeled receivers along the alignment, of which 289 were noise sensitive.

Within the City of Rancho Cucamonga, the NSR identified 4 noise barriers (S-344, S-353, and S-411) which were found to be feasible (providing 5 dB noise reduction at modeled noise receivers and 7 dB noise reduction at, at least 1 modeled receiver). The feasible noise barriers were analyzed in the Noise Abatement Decision Report (NADR) which found that all four of these walls were reasonable, meaning the reasonableness allowance, calculated in the NSR, was more than the cost to construct the barrier. Therefore, all four of these barriers were included as abatement as part of the project as indicated Chapter 2.2.7.4 of the Final Environmental Document (FED).

Comment 35: City of Rancho Cucamonga	
	<p>Although the project would move lanes of travel closer to highway-adjacent land uses in some locations, project improvements would remain within the Caltrans right of way. Project effects on long-term air quality would not be significant, as discussed in Section 2.2.6, and shown in Table 2-62 and 2-67. Noise barriers would be installed such that project impacts related to long-term operational noise would not be substantial. Therefore, the project would not be incompatible with adjacent land uses.</p> <p>Short-term construction-period air quality considerations are presented in Section 2.2.6. As shown in Table 2-66, construction-period emissions of criteria pollutants and ozone precursors would be generated, but would not exceed the SCAQMD thresholds. Although Caltrans has not adopted and does not recognize SCAQMD thresholds, the SCAQMD thresholds have been provided in this Environmental Document for informational purposes. As stated in Chapter 1, standard measures to protect air quality would be implemented as part of the project, including:</p> <p>Compliance with Standard Specification 14-9.02 and other standard practices according to the Air Resources Board and South Coast Air Quality Management District (SCAQMD) requirements for air quality restrictions such as reducing idling time, proper maintenance of equipment, and fugitive dust control during the construction period.</p>

Comment 35: City of Rancho Cucamonga

All vehicles and equipment will meet appropriate model year EPA/NHTSA/CARB standards related to fuel efficiency and emissions. All engines or portable engine-driven equipment required to obtain permits will obtain either a CARB Portable Equipment Registration or a permit from SCAQMD.

Additional avoidance/ minimization measure will be implemented to further minimize impacts. It includes providing schools with advance notice of construction activity anticipated to occur within 1,000 feet of the school property, as identified in measure AQ-4 in Section 2.2.6.4.

As shown in Section 2.2.7 Noise, the construction impacts are anticipated to be temporary and minimal with the implementation of noise abatement measures. In addition, sound walls are proposed at the appropriate heights as part of the project to provide noise abatement in the areas where noise impacts are forecasted to occur due to project operation.

As described in Section 2.2.6 Air Quality, and Section 2.2.7 Noise, the construction impacts are anticipated to be temporary and minimal with the implementation of construction air quality compliance measures, and standard noise abatement measures.

35-17 Table 2-3, Parks, Trails, and Other Recreational Facilities Within 0.5 mile of the Project Limits, will be updated with the information provided.

Comment 35: City of Rancho Cucamonga	
	<p>35-18 Table 2-3, Parks, Trails, and Other Recreational Facilities, lists four parks and recreational resources within 0.5 mile of the proposed project within the City of Rancho Cucamonga. These include the following parks:</p> <ul style="list-style-type: none"> • Garcia park, located approximately 0.4 miles from the project limits. • Victoria Arbor park located approximately 0.5 mile from the project limits • Rancho Cucamonga Adult Sports park located approximately 0.5 mile from project limits. <p>The project would not require any right of way from these facilities, and would not affect their access due to construction activities. In addition, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that the project would have any permanent or temporary impacts on these facilities. The project does not use these properties and does not hinder the preservation of their intended use.</p> <p>However, since construction activities associated with falsework at the Etiwanda Overhead are anticipated to result in the temporary closure of the Pacific Electric Trail, a “temporary occupancy” could occur. Coordination with the City of Rancho</p>

Comment 35: City of Rancho Cucamonga

Cucamonga regarding the Section 4(f) process and Caltrans' evaluation and determination with respect to the proposed projects' potential to impact to the Pacific Electric Trail began with a meeting with the City's Senior Planner, Mike Smith, along with other City staff on July 6, 2017. A letter providing a summary of Caltrans' evaluation and determination, included avoidance and minimization measures developed to address the proposed project in relation to the Pacific Electric Trail was sent to the City on January 22, 2018. The City of Rancho Cucamonga provided written concurrence on January 23, 2018.

For analysis of air quality impacts to sensitive receptors, a discussion of the CEQA checklist question on sensitive receptors is provided in Air Quality Section 2.2.6 and also in CEQA Environmental Checklist Section 3.1.1. The provided impact analyses demonstrate that the project emissions during short-term construction and long-term operations would not violate any air quality standard or contribute substantially to any existing or projected air quality violation.

The project has the potential to produce noise impacts on sensitive receptors due to traffic; however, the project will construct noise attenuation measures in the form of soundwalls. For more detail on sound walls and noise analysis please refer to Noise Section 2.2.7. For additional information on the avoidance of noise impacts during construction activities, please see Master

Comment 35: City of Rancho Cucamonga	<p>Response MR-4 Project Construction Noise Impacts.</p> <p>35-19 Community facility number 75 will be removed from Table 2-6 as well as the associated figure.</p> <p>35-20 It is stated in Section 2.1.9.3 Traffic and Transportation of the circulated Draft Environmental Document, that Caltrans policy requires that simultaneous closures of consecutive interchanges not to be allowed. This requirement is implemented with Standard Special Provision of the Temporary Traffic Control Section 12-4.02C(1).</p> <p>35-21 Air quality analysis for the project is provided in section 2.2.6 of this document. According to Section 2.2.6, the project is included in the SCAG 2016–2040 RTP/SCS Amendment 1 and SCAG 2019 FTIP Amendment 1 under project numbers 4122006 and 20159901, respectively. The SCAG 2016–2040 RTP/SCS Amendment 1 was found to be conforming by the Federal Highway Administration (FHWA) on May 12, 2017 and the SCAG 2019 FTIP Amendment 1 was found to be conforming FHWA on December 17, 2018. As such it is concluded that the project’s operational emissions meet the transportation conformity requirements imposed by EPA and SCAQMD. Furthermore, the 2016 RTP/SCS includes the I-15 Express Lanes project as part of its greenhouse gas (GHG) emissions reduction measures that provide relief from existing and projected congestion.</p>
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Comment 35: City of Rancho Cucamonga

Furthermore, localized emissions of particulate matter (PM) from transportation projects are required to be analyzed as part of the transportation conformity process. Total traffic volumes, truck volumes, and other operational traffic characteristics of projects are required to be presented to the SCAG Transportation Conformity Working Group (TCWG) to determine the potential for a project to be a “project of air quality concern” (POAQC), and result in particulate matter hot-spots. The required information was presented to the TCWG, which concurred with the determination that the project was not a POAQC after the July 26, 2016 meeting.

Noise impacts are addressed in section 2.2.7 of this document. Based on operational noise impacts, several noise barriers are planned to be constructed as part of the project at locations where found to be feasible and reasonable, and approved by the benefited receptors.

As discussed in Chapter 2 Section 2.1.5.3 Community Character and Cohesion, the project would not have impacts on land use, affect community facilities and services, nor will it affect economic conditions, property tax, employment, and business activities. The project would improve traffic conditions in the GP lanes, and overall mobility in the project area, and is not anticipated to have direct or indirect impacts on the housing market.

Comment 35: City of Rancho Cucamonga	
	<p>35-22 Foothill Blvd. ramps are anticipated to remain open to traffic during construction, except for short term night closures. During the Foothill Blvd ramps and Foothill Blvd. Undercrossing bridge construction, it is anticipated that there will be short term night closures for temporary construction activities such as falsework erection and removal, demolition of partial structure (overhang) for bridge widening and to place temporary railing and striping. The duration of the short term night closures would be finalized in coordination with the City, SBCTA and Caltrans during the final design phase based on the contractors means and methods.</p> <p>Conceptual Traffic Handling Plans to show detour routes during construction have been prepared and were presented to the City on April 6th, 2017. This meeting was attended by Jason Welday, Albert Espinoza from the City of Rancho Cucamonga, SBCTA (Dennis Saylor and Brian Smith), and SBCTA's consultants. These Conceptual Traffic Handling Plans were concurred by the City. Final construction staging plans will be developed in coordination with the City prior to beginning of construction.</p> <p>According to the TMP prepared for the project, closures and detours will be coordinated with the local jurisdictions during the design-build phase of the project. Public awareness campaigns will be conducted to allow the public avoidance of closures and use of alternate routes. Closures will be</p>

Comment 35: City of Rancho Cucamonga

temporary, short term, and mostly during off-peak hours. Furthermore, the project will relieve congestion and improve mobility in the project area, which will benefit major shopping destinations in the City of Rancho Cucamonga.

Two transmission lines owned by Southern California Edison (SCE), currently cross I-15 along Arrow Route. The proposed project is required to replace the southerly steel pole in place and and relocate the northerly pole along the same line 62 feet east from the existing location (175 feet from the I-15 alignment) in order to accommodate the widened structure. . These proposed changes would push the 66kV overhead line to cross outside the state right of way requiring Permanent Easement from the adjacent CRPT Land Holding property. The sliver take consists of approximately 0.12 acres, which is approximately 0.32 percent of the total 34.33 acre property. All right of way acquisition as related to the CRPT Land Holding property will be performed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as Amended.

Refenrec to “temporaty impacts” in Section 2.1.6.3 under Environment Consequences-Permanent was replaced with “permnanet impact”.

35-23 According to Project Description Section 1.6 and Utilities/Emergency Services Section 2.1.8 of the Environmental Document, the temporary construction easement is needed for the utility relocation to realign the existing Southern

Comment 35: City of Rancho Cucamonga	
	<p>California Edison 66 KV overhead electrical poles and lines. Construction activities are temporary and would not create permanent impacts.</p> <p>35-24 The fourth paragraph on page 2-131 (of Section 2.1.7.3) compares the percentage of individuals below poverty level within one section of the City of Rancho Cucamonga representing the community study area block groups to the entire City of Rancho Cucamonga and the County of San Bernardino. No change is required.</p> <p>35-25 Please see the response to comment 35-20 above regarding Caltrans policy not to allow closure of consecutive interchanges during construction.</p> <p>35-26 The project was revised to include an additional GP lane on SB Foothill Boulevard loop entrance ramp to increase storage capacity at this location. Please see Chapter 1, Section 1.6.1.2, Ramp Reconstruction sub heading).</p> <p>Concerns regarding the impacts of ramp metering on the local street intersections are acknowledged. Per Caltrans Deputy Directive 35-R1, "Provisions for ramp metering shall be included in any project that proposes additional capacity, modification of an existing interchange, or construction of a new interchange, within the freeway corridors identified in the Ramp Metering Development Plan, regardless of funding source." Typically, the existing and proposed ramp metering system controllers are set to trigger ramp metering based on congestion on freeway mainline lanes. However, it is realized that</p>

Comment 35: City of Rancho Cucamonga

Foothill Boulevard location requires special attention in terms of traffic demand. Caltrans will coordinate with the City regarding the ramp metering operations at Foothill Boulevard entrance ramps to reach a balance in the freeway main line as well as in city streets congestion management. Caltrans may elect to leave the meters off except for situations such as incident clearance when active management of on-flows is required.

35-27 Please see section 2.1.10.4 Environmental Consequences. There will be no widening to the outside within the segment from Post Mile 7.56/10.11 (just south of the SR-210 and I-15 interchange, to north of the Summit); therefore, the Classified Landscaped Freeway designation will not be affected by the project. The project will affect the segment from Post Mile 5.27 to Post Mile 5.99 (from the Foothill Boulevard undercrossing, north approximately 0.72 miles to south of the Etiwanda Avenue undercrossing). However, disturbed landscaping within this segment will be replaced to maintain the Classified Landscaped Freeway designation. A statement was added under the Classified Landscaped Freeway discussion in section 2.1.10.4 to clarify. The project will implement VA-8 identified in Section 2.1.10.5, to maintain the Classified Landscaped Freeway designation of the affected freeway segment. It is also noted that the landscaping within the affected classified freeway segment would will be replaced, and the quantity of replacement planting would will be calculated to meet the requirements of continuous planting, and

Comment 35: City of Rancho Cucamonga	
	<p>thus maintain the classification of the segment. Measure VA-8 was developed to implement requiremen to avoid the declassification of Classified Landscape Freeway segments within the project area</p> <p>35-28 There are freestanding lighting fixture currently existing at the Pacific Electric Trail. These light fixtures will remain in place and will not be affected by the project. Please see response to comment 35-9 of this letter for description of the coordination with the City of Rancho Cucamonga staff regarding this matter.</p> <p>35-29 Noise barrier S-353 was remodeled for noise abatement and found that its length can be revised to allow less impacts on the visibility of the businesses. Section 2.2.7 of the Environmental Document has been updated to reflect this determination.</p> <p>35-30 The information is in Table 2-100 in the FED. The table has been updated to include the projects' status change as provided.</p> <p>35-31 Appendix A was revised to make the corrections regarding the city's lease terms of the Pacific Electric Trail.</p> <p>35-32 There are freestanding lighting fixtures currently existing at the Pacific Electric Trail. These light fixtures will remain in place and will not be affected by the project. Please see response to comment 35-9 of this letter for description of the coordination with the City of Rancho Cucamonga staff regarding this matter.</p>

Comment 36A: Salvador and Elizabeth Lopez

From: Elizabeth Lopez [<mailto:el0554776@gmail.com>]

Sent: Friday, March 16, 2018 1:47 PM

To: Shankel, James A@DOT <james.shankel@dot.ca.gov>

Subject: "Interstate 15 Corridor Project"

Mr. James Shankel,

Sending your comments and concerns in regards to Express Lanes Project. Send your our cover letter, petition and petitioners signatures. Thank you, Ms. Lopez

From: Cynthia Kellman [<mailto:cpk@cbcearthlaw.com>]

Sent: Friday, March 16, 2018 1:11 PM

To: Shankel, James A@DOT <james.shankel@dot.ca.gov>

Cc: Amy Minter <acm@cbcearthlaw.com>

Subject: Comments on Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for Interstate 15 Corridor Project

Dear Mr. Shankel,

Attached please find a comment letter from Amy Minter regarding the above-captioned subject.

Please feel free to contact me with any questions or concerns.


Cynthia Kellman
CHATTEN-BROWN & CARSTENS
2200 Pacific Coast Highway, Ste. 318
Hermosa Beach, CA 90254
Tel: 310-798-2400 x6
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Email: cpk@cbcearthlaw.com
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Thank you for the email transmitting the listed documents. Please see below for the response to comments provided in the cover letter and the letter prepared by Amy Minter on your behalf.

Comment 36A: Salvador and Elizabeth Lopez	
<p>Letter to: sbcta and Caltrans</p> <p>Opposing the Approval of the Mitigated Negative Declaration</p> <p>“Interstate 15 Corridor Project”</p> <p>March 3-10-2018</p> <p>Petition</p> <p>We the residents and surrounding communities (Rancho Cucamonga & Fontana) near the I-15 corridor project “Oppose” <u>the approval of the Mitigated Negative Declaration.</u></p> <p>The MND doesn’t properly describe the project’s adverse impacts to the public and the mitigation are unclear and insufficient, particularly with regard to the project’s noise impacts on residents.</p> <p>We are requesting SBCTA and Caltrans include a sound wall(s) in this project prior to the commencement of construction to protect our community from the adverse noise impacts associated with</p>	<p>36A-1 Section 2.2.7.3 identifies soundwalls that satisfied both applicable cost and noise reduction criteria requirements. Based on the soundwall surveys sent on March 21, 2018, to all benefited receptors, soundwalls S-344, S-353, S-396, and S-411 received a sufficient level of support and will be constructed as part of this project. See Table 2-81 for specific information on the height of soundwalls S-344, S-353, S-396, and S-411. The proposed soundwall in front of the Scandia Amusement Park (soundwall S-95) was not supported and will not be constructed as part of this project. The content in Section 2.2.7.3 of the FED has been updated to reflect the results of the sound surveys, and Minimization Measure NOI-1 has been revised to provide that soundwalls S-310, S-344 S-353, and S-396 will be constructed before commencement of heavy civil and structural work on the freeway in the areas where the sound walls will be constructed. Any work which would occur prior to construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.</p> <p>As such, temporary noise barriers may not be necessary. As discussed in Section 2.2.7.3 Environmental Consequences (Temporary), construction noise is regulated by Caltrans’ Standard Special Provision 14-8.02, “Noise</p>

Comment 36A: Salvador and Elizabeth Lopez		
36A-1 Cont.	<p>construction of this project and the traffic noise that will be generated after construction is completed. We also request that temporary noise barriers be put in place during construction in any area where permanent wall is not possible.</p>	<p>Control,” of the 2015 Standard Specifications and Special Provisions. In conjunction with adhering to Caltrans’ Standard Specifications and Special Provisions, additional noise reducing measures which could be used to assist the contractor in achieving compliance with the construction noise requirements include but are not limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work and/or installing acoustic barriers around stationary construction noise sources.” Additional noise reducing features discussed above may be considered by the construction contractor if the 86 dBA threshold cannot be met.</p> <p>Section 2.2.7.4 discusses potential noise impacts to areas with sensitive receptors adjacent to the project area after the project is constructed. Table 2-82 shows the design year build condition for the project’s traffic noise results and identifies Noise Abatement Criteria as well as abatement considered as part of the project.</p> <p>Based on public comments received during circulation of the DED, additional analysis was conducted to determine if barrier S-344 could be extended to provide shielding for the Sacred Heart Parish School. The analysis resulted in a determination that the addition of a 14-foot-high barrier extending from station 307+77 to station 314+00 along the I-15 mainline and an additional</p>
36A-2	<p>We support the permanent installation of a sound wall that is 14’ high or taller. A construction design plan is also missing from the MND; which without the adverse impacts cannot be disclosed or mitigated.</p> <p>Salvador Lopez Elizabeth Lopez</p>	

Comment 36A: Salvador and Elizabeth Lopez	
	<p>from station 311+07 up to station 316+00, would provide 7 dB worth of noise reduction and would meet the feasibility requirement and the design goal at modeled receiver M-45. Figure 2-50 shows the location of the barrier extension and Table 2-83 shows information associated with the increased length of the barrier included in the IS/EA, Chapter 2, Section 2.2.7.4 in the discussion of Area E (page 2-420).</p> <p>Additionally, based on public comments received during the public comment period, additional analysis was conducted to determine if barrier S-353 could be reduced in length to avoid potential impacts to the visibility of the Bass Pro Shop located along the Southbound (SB) side of the I-15 alignment. The additional noise modeling showed that Barrier S-353 could be shortened 300 feet from its southern terminus at station 332+00 to station 335+00, and shortening of the barrier would not result in any receivers losing the 5 dB benefit required by the Caltrans Noise Protocol. Table 2-84 in the ED shows that the 300-foot reduction in length would result in one benefited receptor receiving 6 dB noise reduction as opposed to 7 dB noise reduction. Figure 2-50 shows the reduced barrier length.</p> <p>36A-2 Figure 1-6 in Chapter 1 of the environmental document represents the design plans that are currently available. Final design plans will be available during the Design-Build phase of the project development.</p>

Comment 36B: Salvador and Elizabeth Lopez	
<div> <div> <p>Hermosa Beach Office Phone: (310) 798-2400 Fax: (310) 798-2402</p> <p>San Diego Office Phone: (858) 999-0070 Phone: (619) 940-4522</p> </div> <div>  <p>Chatten-Brown & Carstens LLP 2200 Pacific Coast Highway, Suite 318 Hermosa Beach, CA 90254 www.cbcearthlaw.com</p> </div> <div> <p>Amy Minter Email Address: acm@cbcearthlaw.com</p> <p>Direct Dial: 310-798-2400 Ext. 3</p> </div> </div> <p>March 16, 2018</p> <p><i>Via Email (james.shankel@dot.ca.gov) and U.S. Mail</i> James Shankel, Senior Environmental Planner California Department of Transportation 464 West 4th Street, 6th Floor, MS-827 San Bernardino, California 92410-1715</p> <p>Re: Comments on Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for Interstate 15 Corridor Project</p> <p>Dear Mr. Shankel,</p>	
<p>On behalf of Salvador and Elizabeth Lopez, we provide these comments on the Mitigated Negative Declaration (MND)/Environmental Assessment (EA) prepared for the I-15 Corridor Project (the “Project”). We have serious concerns regarding the impacts that would result from this Project and the adequacy of the environmental review documents that have been prepared to analyze the impacts.</p>	
<p>C-1 [Due to the Project’s significant adverse impacts, and the MND/EA’s failure to commit to mitigation measures due in part to the unstable project description, an environmental impact report (EIR) must be prepared.</p>	<p>C-1 The project is fully committed to avoiding and minimizing impacts when and where possible, and to mitigation measures when potential impacts cannot be otherwise minimized. The Project Description in both, the circulated <i>Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment</i> (Draft Environmental Document, DED) and <i>this Initial</i></p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p><i>Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact</i> (Final Environmental Document, FED) has not changed. Furthermore, the FED identifies all of the avoidance and minimization measures the project will implement, and also identifies mitigation measures that will be implemented to reduce to less than significant the project's potential impacts on the Paleontological resources and Waters of the State. The mitigation measures were identified in the Proposed Mitigated Negative Declaration that was included in the circulated DED and are again included in this FED. The project would have less than significant impacts on all other human, physical, and biological resources, as stated in the Proposed Mitigated Negative Declaration and the Mitigated Negative Declaration. Additionally, all measures are compiled into a prepared Environmental Commitments Record, included in Appendix C—Avoidance, Minimization and/or Mitigation Summary of both the circulated DED and this FED, to further facilitate implementation of all measures during the final design and construction components of the Design-Build phase of the project.</p> <p>Chapter 1 of the DED and FED provides a full project description. The project description includes a precise location and boundaries of the proposed project depicted in regional and vicinity maps to give the reader a sense of the project's geographical location and its surroundings. Chapter 1 also includes specific</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>information regarding the project's goals and objectives. Consistent with CEQA Guidelines § 15124(c), the project description includes: "A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities." The project description discusses jurisdictional issues relating to project commencement such as the acquisition of applicable permits, project duration, location, and a listing of related environmental review and consultation requirements associated with applicable federal, state or local laws, regulations or policies. Sufficient detail of the project's activities and features, are set forth to establish a baseline for use in analyzing the project impacts on the affected environment.</p>
<p>C-2 In particular, the MND/EA's analysis of construction and operational noise impacts is inadequate. It fails to fully analyze the impacts this Project would have on the many homes and schools located near the I-15 freeway.</p>	<p>C-2 The circulated DED (Chapter 2.2.7.3) identified five soundwalls that satisfied both applicable cost and noise reduction criteria requirements. Additionally, the DED also identified in Section 1.6, under "Other Project Provisions" subsection, a number of standard specifications and special provisions that will be incorporated as part of the project to address noise and air quality impacts during construction. Based on the soundwall surveys sent on March 21, 2018, to all benefited receptors, soundwalls S-344, S-353, S-396, and S-411 received a sufficient level of support and will be constructed as part of this project. The proposed soundwall in front of the Scandia Amusement Park (soundwall S-95) was not supported and will not be constructed as part of this project.</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>Section 2.2.7.3 of the FED has been updated to reflect the results of the soundwall surveys. The FED (page 2-441) has also been updated to identify minimization measure NOI-1, which states: “The Design-Builder will complete construction of all soundwalls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors”. Additionally, on page 2-400 in Section 2.2.7.3 Environmental Consequences (Temporary), the ED states that “construction noise is regulated by Caltrans’ Standard Specifications in Section 14-8.02, “Noise Control,” of the 2015 Standard Specifications and Special Provisions.” The contractor will, as practicable and applicable, implement additional noise reducing measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work and/or installing acoustic barriers around stationary construction noise sources.</p> <p>Chapter 2, Section 2.2.7.4 discusses potential noise impacts to areas with sensitive receptors adjacent to the project area after the project is constructed. Table 2-82 shows the design year build condition project traffic noise results and identifies Noise Abatement Criteria as well as abatement considered as part of the project.</p>

Comment 36B: Salvador and Elizabeth Lopez

Based on public comments received during public comment period, additional analysis was conducted to determine if barrier S-344 could be extended to provide shielding for the Sacred Heart Parish School. The analysis resulted in a determination that the addition of a 14-foot-high barrier extending from station 307+77 to station 314+00 along the I-15 mainline and an additional barrier extending from station 311+07 up to station 316+00, would provide 7 dB worth of noise reduction and would meet the feasibility requirement and the design goal at modeled receiver M-45. Figure 2-50 shows the location of the barrier extension and Table 2-83 provides information about the increased length of the barrier and is included in the IS/EA, Chapter 2, Section 2.2.7.4 in the discussion of Area E (page 2-420).

Additionally, based on public comments received during the public comment period, additional analysis was conducted to determine if barrier S-353 could be reduced in length to avoid potential impacts to the visibility of the Bass Pro Shop located along the Southbound (SB) side of the I-15 alignment. The additional noise modeling showed that Barrier S-353 could be shortened 300 feet from its southern terminus at station 332+00 to station 335+00, and shortening of the barrier would not result in any receivers losing the 5 dB benefit required by the Caltrans Noise Protocol. Table 2-84 in the ED shows that the 300 foot reduction in length would result in one benefited receptor receiving 6 dB noise reduction as opposed to 7 dB

Comment 36B: Salvador and Elizabeth Lopez	
	<p>noise reduction. Figure 2-50 shows the reduced barrier length.</p> <p>Based on the results of the voting process, barrier S-344 and S-353 were approved by all responding benefited receptors. A total of 61 responses were received relating to Noise Barrier S-344 and a total of 20 responses were received relating to Noise Barrier S-353. All of those responses were in support of the barriers.</p> <p>According to the Caltrans 2011 Traffic Noise Analysis Protocol, a proposed noise-abatement will be incorporated into the project if 50% or more of the benefited receptors support the barrier. Since a majority of the responding benefited receptors supported Noise Barriers S-344 and S-353, (see Figure 2-41 and 2-50) the barriers will be incorporated as abatement as part of the project.</p>
<p>C-3 In particular, the Lopezes are concerned about these noise impacts in the area between Foothill Boulevard and Baseline Avenue, referred to as Area E in the MND/EA. There are many homes and the Perdew Elementary School located very near the freeway. If mitigation measures are not put in place, the lengthy construction period will have many deleterious health, sleep disturbance and other impacts on the surrounding residential community. Similarly, the increased volume of traffic the Project will allow for will increase noise impacts after construction is completed. The Project must include the installation of soundwall S-353 and S-344 prior to construction activities to reduce the significant adverse noise impacts.</p>	<p>C-3 The closest “noise-sensitive” portion of Perdew Elementary school is located approximately 675 feet from the edge of shoulder on the east side of the I-15 alignment. The Traffic Noise Model (TNM) models land uses within 500 feet from the centerline. Per 23 CFR 772, the applicable noise abatement criteria (NAC) for settings such as residences, playgrounds, and schools is 67 dBA Leq(h). Perdew Elementary school’s distance from the centerline put it outside the area of modeling analysis. However, receptor M-100, which was one of the modeled receptors, as shown in Figure 2-41, is located between the I-15 alignment and Perdew Elementary School. As shown in Table 2-81, during the design year, traffic noise results at receptor</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>M-100 are projected to be 65 dBA Leq, , which would be below the applicable NAC. As the Perdew Elementary school is located further from I-15 than modeled receiver M-100, noise levels would be less at the school.</p> <p>As discussed in this FED, noise abatement measures include barriers S-344 and S-353. These two barriers are discussed in Chapter 2 Section 2.2.7.4 of this FED in the discussion of Area E (page 2-420). The location of these barriers is shown in figure 2-50.</p> <p>The FED identifies minimization measure NOI-1 on page 2-441 which provides that “[t]he Design-Builder will complete construction of all soundwalls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway to developments adjacent to the corresponding portions of the project area that include sensitive receptors.”</p>
<p>C-4 [Similarly, the increased volume of traffic the Project will allow for will increase noise impacts after construction is completed. The Project must include the installation of soundwall S-353 and S-344 prior to construction activities to reduce the significant adverse noise impacts.</p>	<p>C-4 Please refer to response to comments C-3 of this letter.</p>

Comment 36B: Salvador and Elizabeth Lopez	
I. LACK OF NOTICE	
<p>C-5 [The Lopezes have spoken with at least 100 of the residents living near the Etiwanda Avenue bridge that would be impacted by the Project. The overwhelming majority of these residents were unaware of the I-15 Corridor Project and learned of it for the first time through my clients. Caltrans must provide adequate notice to the many impacted residents so that they can comment upon the Project and provide their position regarding the installation of soundwalls as part of the Project.</p>	<p>C-5 The comment period for the circulated DED began on February 15, 2018 and concluded on March 16, 2018. As discussed in Chapter 4, Section 4.3.2 Draft Environmental Document Public Circulation of this FED, notices were sent out to public agencies, residents within 0.25 miles of the project vicinity, and other individuals who expressed interest. (See Figure 4.2 below for the Public Notice Distribution Boundaries) Chapter 6 of the circulated DED identifies the properties included in the distribution list, as does Chapter 6 of this FED. The notices that were mailed to the public provided the same information as was included in the published notices; a brief description of the project, the locations where the Draft Environmental Document, the <i>Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment</i>, were available for review by the public, the review comment period and contact information for the submittal of comments and/or for further information. In addition, the mailed notices provided information on the location and date of the public hearing.</p> <p>The notice was published in English in the Daily Bulletin, and in the Press Enterprise on February 15, 2018 and February 22, 2018 and in the Fontana Herald News on February 16, 2018 and February 23, 2018. The notice was also published in Spanish in La Prensa on February 16, 2018 and February 23, 2018. The circulated DED was also made available to the public at public libraries, which were identified in the public</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>notice. This information was also available at SBCTA’s project website. In addition to the mailing and publishing of the public notices, SBCTA representatives presented information on the DED availability and the upcoming public hearing to the City Council for the cities within the project area at their regularly scheduled meetings. The Public Hearing for the project was held on March 1, 2018 at the Etiwanda Intermediate School in Rancho Cucamonga, CA, from 5:30pm to 7:30pm.</p>
<p>II. An EIR is Required</p> <p>Because issuing an MND truncates the CEQA process with often minimal environmental review, CEQA’s “legal standards reflect a preference for requiring an EIR to be prepared.” (Mejia v. City of Los Angeles (2005) 130 Cal. App. 4th 322, 332.) An EIR must be prepared instead of an MND when there is substantial evidence to support a fair argument that the project may have significant adverse environmental impacts. (Public Resources Code § 21151.) “The fair argument standard is a ‘low threshold’ test for requiring the preparation of an EIR.” (Pocket Protectors v. City of Sacramento (2004) 124 Cal.App.4th 903, 928.) “If there is substantial evidence of a significant environmental impact, evidence to the contrary does not dispense with the need for an EIR when it can still be ‘fairly argued’ that the project may have a significant impact.” (Friends of “B” Street v. City of Hayward (1980) 106 Cal.App.3d 988, 1001; see also CEQA Guidelines § 15064.) Courts show a clear preference for resolving doubts in favor of preparing an EIR. (Architectural Heritage Association. v. County of Monterey (2004) 122 Cal.App.4th 1095, 1110; San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1996) 42 Cal.App.4th 608, 617-618;</p>	

Comment 36B: Salvador and Elizabeth Lopez	
<p>Stanislaus Audubon Society, Inc. v. County of Stanislaus (1995) 33 Cal.App.4th 144, 151; Quail Botanical Gardens Foundation, Inc. v. City of Encinitas (1994) 29 Cal.App.4th 1597, 1602-03.)</p> <p>Additionally, the MND, and the initial study upon which it relies, must provide the lead agency with adequate information regarding a project to determine the appropriate environmental review document and “documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment.” (Ctr. for Sierra Nevada Conservation v. County of El Dorado (2012) 202 Cal. App. 4th 1156, 1170.) There must be a basis within the record to support the conclusions reached by the initial study. (Lighthouse Field Beach Rescue v. City of Santa Cruz (2005) 131 Cal.App.4th 1170, 1201.) “Where an agency. . . fails to gather information and undertake an adequate environmental analysis in its initial study, a negative declaration is inappropriate.” (El Dorado County Taxpayers for Quality Growth v. County of El Dorado (2004) 122 Cal. App. 4th 1591, 1597. An MND is proper only if project revisions would avoid or mitigate the potentially significant effects "to a point where <u>clearly</u> no significant effect on the environment would occur, and ... there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." (Pub. Resources Code § 21064.5; accord, § 21080, subd. (c)(2), emphasis added, see also Mejia v. City of Los Angeles (2005) 130 Cal.App.4th 322, 331. Here, there is substantial evidence to support a fair argument that the I-15 Corridor Project would have significant noise, traffic, air quality, and greenhouse gas impacts; thus, an EIR should be prepared.</p>	<p>C-6 This FED, as well as the circulated DED, includes the results of the noise analysis, traffic analysis, air quality analysis, as well as a climate change analysis, each component of which indicates that the I-15 Corridor Project will not result in significant impacts, related to these specific areas of analysis as well as all other analyses completed for the project, and included in the DED and FED.</p> <p>As discussed in Chapter 3 Section 3.1.1 subsection 12, the proposed project will not result in significant noise impacts. The responses to comments C-2 and C-3, above, highlight the additional noise analysis that was performed, as a result of comments provided on the circulated DED, however, the additional analysis did not change the conclusion that the project will not result in significant impacts. The noise analysis for the project is summarized in Section 2.2.7. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. Sound control provisions included in Section 14-8.02, Standard Specifications and Special Provisions.</p> <p>Additionally, to minimize the impact of noise effects associated with construction and operation of the proposed project, measure NOI-1 will be implemented; prior to construction, the Design-Builder will construct noise barriers S-344, S-353, S-396, and S-411 to reduce impacts to noise sensitive land uses along the project alignment.</p> <p>Additionally, to minimize the impact of noise effects associated with construction and operation of the proposed project, measure NOI-1 will be implemented;</p>

Comment 36B: Salvador and Elizabeth Lopez

prior to construction, the Design-BUILDER will construct noise barriers S-344, S-353, S-396, and S-411 to reduce impacts to noise sensitive land uses along the project alignment.

The traffic analysis prepared for the project and included in Section 2.1.9 of the Environmental Document shows that the project would provide improved traffic conditions for future traffic demand in the General-Purpose (GP) lanes. Moreover, the Build Alternative would provide drivers with a reliable travel option at 60 mph or more when using the Express Lanes. As shown in Table 2-37 for Study Intersection analysis in the year 2024 and Table 2-51 in the year 2045, the project would result in minimal impacts on surface street intersections with ramps.

The air quality analysis for the project is summarized in Section 2.2.6. Localized emissions of particulate matter (PM) from transportation projects are required to be analyzed as part of the transportation conformity process. Total traffic volumes, truck volumes, and other operational traffic characteristics of projects are required to be presented to the SCAG Transportation Conformity Working Group (TCWG). The required information was presented to the TCWG at their July 26, 2016 meeting. TCWG determined that the I-15 Corridor Project is “Not a Project of Air Quality Concern, (Not a POAQC)” and also that a hot spot analysis was not required. EPA, and FHWA provided their respective concurrences via email after the meeting. A copy of the TCWG project list is included in Section 4.4 of this ED.

Comment 36B: Salvador and Elizabeth Lopez	
	<p>Operational emissions were quantified and presented in Table 2-62 (Criteria Pollutant Emissions) and Table 2-67 (MSAT Emissions) in the Air Quality Section 2.2.6.3 of the Environmental Document. As shown in Table 2-67, operational MSAT emissions would be slightly higher under the Build Alternative for some MSATs when compared to the No Build Alternative, but would be substantially lower at Horizon Year 2045 relative to the Baseline Year 2014.</p> <p>Section 1.6, page 1-78 includes a list of standard provisions incorporated into the project that address air quality during construction. These provisions are further discussed in Section 2.2.6.</p> <p>Discussion of Climate Change and GHG emissions for this project are provided in Chapter 3, Section 3.2.3 of the Environmental Document. SB 375 requires that the Regional Transportation Plan (RTP) for a region include a Sustainable Communities Strategy (SCS), which outlines growth strategies that better integrate land use and transportation planning and help reduce the state's GHG emissions from cars and light trucks (California Government Code §65080 (b)(2)(B)). For the SCAG region, the California Air Resources Board (CARB) has set per-capita GHG reduction targets for 2020 and 2035 that the SCAG 2016-2040 RTP/SCS has been developed to meet. As discussed in Section 3.2, the project is identified in the SCAG 2016-2040 (RTP/SCS) under project number 4122006. The SCAG 2016–2040 RTP/SCS (https://www.scag.ca.gov) includes several major initiatives that the project would either directly</p>

Comment 36B: Salvador and Elizabeth Lopez

directly implement, or would support, including the RTP/SCS initiatives to improve highway and arterial capacity through the implementation of Express Lanes, demand management by encouraging modes other than single-occupancy vehicles, dynamic corridor congestion management, and the SCAG Congestion Management Program (CMP). Each of these initiatives would contribute to RTP/SCS implementation, the GHG reduction target of which is 18 percent per capita relative to a 2005 baseline by 2035. This target surpasses the target developed for the SCAG region by CARB as part of SB 375. As noted in this section, Caltrans has used the best available information based on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. In addition to the project complying with existing rules regarding the control of pollutants, the project would implement measures to reduce potential greenhouse gas effects as outlined in the Climate Change Section 3.2.

According to the studies conducted for the project and used in the preparation of the CEQA evaluation provided in Chapter 3 of this Environmental

Comment 36B: Salvador and Elizabeth Lopez	
	Document, the project, as designed would not result in any significant impacts; therefore, preparation of an EIR is not required.
<p>The National Environmental Policy Act (NEPA) likewise requires preparation of an EIS. An EIS must be prepared if substantial questions are raised as to whether a project may cause significant degradation of some human environmental factor.” (Blue Mountains Biodiversity Project v. Blackwood 161 F.3d 1208, 1212 (9th Cir. 1998).) It need not be shown “that significant effects will in fact occur, but only that there are substantial questions whether a project may have a significant effect.” (Center for Biological Diversity v. National Highway Traffic Safety Admin. 538 F.3d 1172, 1219-20 (9th Cir. 2008).) In reviewing an agency's decision not to prepare an EIS, courts must determine whether the agency has taken a “hard look” at the consequences of its actions “based on a consideration of the relevant factors.” (Blue Mountains, supra, 161 F.3d at 1211.) A decision not to prepare an EIS is unreasonable if substantial questions are raised regarding whether the proposed action may have a significant effect upon the human environment and the agency fails to “supply a convincing statement of reasons why potential effects are insignificant.” (Ibid.)</p> <p>When the consequences of a federal action are “controversial, that is, when substantial questions are raised as to whether a project ... may cause significant degradation of some human environmental factor, or there is a substantial dispute [about] the size, nature, or effect of the major Federal action,” an EIS must be prepared. (National Parks & Conservation Ass'n v. Babbitt 241 F.3d 722, 736 (9th Cir. 2001).) “[W]hen evidence, raised prior to the preparation of an EIS or FONSI, casts serious doubt upon the reasonableness of an agency's conclusions,” the burden is on the</p>	C-7 Please see Responses to C-36A-1 and C-36A-2.

Comment 36B: Salvador and Elizabeth Lopez	
<p>C-7 [agency to come forward with a “well-reasoned” and “convincing statement” demonstrating that there is no public controversy regarding the project's potential environmental consequences. (Id. at 736.) A petition that the Lopezes will be submitting, with signatures from over 140 residents, demonstrates that there is a substantial dispute regarding the Project that must be analyzed in an EIS.</p>	
<p>III. The MND Is Inadequate.</p> <p>A. Inadequate Project Description</p> <p>C-8 [A consistent project description is an important requirement of an environmental review document. The courts have often stated that: “An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR.” (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192-93; accord San Joaquin Raptor/Wildlife Reserve Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 730.) The concern over a stable project description goes to the heart of the MND’s value as a document of disclosure, since without a complete and stable project description, it is impossible to definitively determine what the MND has disclosed. Although an MND is not designed to freeze a project in the mold of the original proposal, “[o]n the other hand, a curtailed or distorted description of the project may ‘stultify the objectives of the reporting process.’” (Dry Creek Citizens Coalition v. County of Tulare, (1999) 70 Cal.App.4th. 20, 28, quoting Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692, 738.)</p>	<p>C-8 SBCTA is fully committed to the implementation of the project with no changes as described in Section 1.6 Project Description of the DED and FED including all identified avoidance, minimization, and mitigation measures. Please also see C-1 Response above.</p>

Comment 36B: Salvador and Elizabeth Lopez	
<p>C-9</p> <p>Despite its length, the MND fails to give the public a clear picture of the Project, leaving the development of many aspects of the Project to what is referred to as the “Design-Build phase.” Issues such as whether the Project will include sound walls and if so, what height would those walls be, is left as an open question, improperly deferred until the later design phase.</p> <p>The location of borrow/fill sites is deferred, as is a determination of whether the less impactful Accelerated Bridge Construction method would be used for bridge construction.</p> <p>The information contained within the MND is to be used as a basis for the decision on what would be the least impactful means for the project to proceed. “An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity.” (McQueen v. Board of Directors of the Mid-Peninsula Regional Open Space District (1988) 202 Cal.App.3d 1136, 1143. “A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental costs...” (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192-193.)</p>	<p>C-9 The Noise Section 2.2.7.4 of the Environmental Document discusses Soundwalls identified as reasonable and feasible and which will be included as abatement as part of the project. The circulated DED identified five soundwalls that satisfied both applicable cost and noise reduction criteria requirements:</p> <ul style="list-style-type: none"> • Barrier S-95 with recommended length and height of 1,770 feet and 12 feet respectively; • Barrier S-344 with recommended length and height of 6,480 feet and 14 feet respectively; • Barrier S-353 with recommended length and height of 3,700 feet and 14 feet respectively; • Barrier S-396 with recommended length and height of 1,535 feet and 14 feet respectively; and • Barrier S-411 with recommended length and height of 1,500 feet and 14 feet respectively; <p>Based on completion of the soundwalls survey, discussed in Section 2.2.7.3 of the FED, S-344, S-353, S-396, and S-411 will be incorporated as abatement as part of the project. Soundwall S-95 was not supported and will not be constructed as part of this project.</p> <p>Per the June 2018 <i>Caltrans Construction Manual</i>, contractors are permitted to identify and use private off-site lands and facilities for the disposal of excess materials or the acquisition of necessary borrow materials. Since the specific sites will be identified at the Design-Build phase, it is not feasible to develop detailed site-specific information for the borrow and fill sites to include in the Environmental Document.</p>

Comment 36B: Salvador and Elizabeth Lopez

However, for any site outside the project's right of way, the Design-Builder is required to show that these sites comply with the State Mining Reclamation Act as well as all local, state, and federal environmental and permitted use regulations. The Design-Builder will be required to prepare a submittal to Caltrans identifying and obtaining environmental approvals for the selected site. The environmental clearance of the selected sites will include all regulatory measures required in order that site construction activities would not result in significant impacts on the environment.

VA Alternative 1.0 - Use Accelerated Bridge Constructing (ABC) Method for Bridge Construction included in Section 1.8 Alternatives Considered but Eliminated from Further Discussion of the Environmental Document, and Table 1-14 Summary of Value Analysis Study Alternatives, was developed as part of the value analysis process conducted for the project in May 2017. The Value Analysis process is conducted for a project to identify value-improving alternatives and strategies that would reduce cost and/or improve performance of the proposed project improvements. The value analysis analyzed and recommended the use of ABC methods in construction of the project where feasible. ABC method is generally applied when building new bridges or replacing and rehabilitating existing bridges. ABC construction method uses innovative planning, design, materials, and construction methods to reduce the onsite construction time. A common reason to use ABC is to reduce traffic impacts (or "mobility impacts") because

Comment 36B: Salvador and Elizabeth Lopez	
	<p>the safety of the traveling public and the flow of the transportation network are directly impacted by onsite construction related activities. However, since methods of construction are not determined at the planning and Environmental Document phase, this method of construction would be available for the Design-Builder at the Design-Build phase of the project development for further assessment and consideration of the least impactful and cost-effective method.</p>

Comment 36B: Salvador and Elizabeth Lopez	
B. Soundwalls Are Required to Mitigated Construction and Operational Noise Impacts	
<p>C-10 We focus our comments regarding the noise impacts of the Project and the mitigation required for those impacts on Area E of the Project, located within the City of Rancho Cucamonga, between Foothill Boulevard and Baseline Avenue. There are many homes located adjacent to or near the I-15 freeway in this area. The Perdew Elementary School is also located within a block of the freeway. All of these sensitive uses would be adversely impacted by the significant construction and operational noise that would result from the Project. The MND fails to adequately disclose these significant impacts.</p>	<p>C-10 The Noise Section of the Environmental Document, which is based on the July 2017 Noise Study Report (NSR) (approved on August 4th, 2017) and the August 2017 Noise Abatement Decision Report (NADR) (approved on August 6th, 2017) identifies potential impacts to land uses surrounding the project alignment. Impacts to land uses in Area E specifically are discussed in Noise Section 2.2.7.3 Area E. The Environmental Document indicates that: “The traffic noise modeling results in Table 2-81 indicate that future design-year with project worst-hour traffic noise levels within Area E would range from 56 dBA Leq(h) at modeled locations M-56, M-61, M-79, and M-80 to 75 dBA Leq(h) at modeled location M-66.” Design-year with project noise levels are predicted to change relative to existing worst-hour traffic noise levels by approximately 0 to 6 dB in this area. Sixty-six modeled receptors would approach or exceed the Noise Abatement Criteria (NAC) for Residential Land Uses (Activity Category B). Table 2-81 shows the impacted land uses.</p> <p>Please see response to comments C-2 and C-3 of this letter which specifically addresses Perdew Elementary school and barriers S-353 and S-344.</p>

Comment 36B: Salvador and Elizabeth Lopez	
<p>C-11 Further, the MND/EA identifies mitigation measures that would substantially reduce or eliminate these significant impacts-the installation of soundwalls S-353 and S-344-but fails to make the inclusion of these soundwalls fully enforceable</p>	<p>C-11 Noise barriers identified in this FED were based on analysis, performed in accordance with the requirements of 23CFR 772. These barriers were identified in accordance with the Caltrans 2011 Traffic Noise Protocol (Noise Protocol), which provides Caltrans' policy for applying 23 CFR 772. Caltrans' Technical Noise Supplement (TeNS) provides further detailed technical guidance on the preparation of noise studies. It is explicitly stated in Section 2.2.7.4, Avoidance, Minimization, and/or Abatement Measures that Caltrans intends to incorporate noise abatement in the form of a barrier. Based on discussion provided in the FED in Section 2.2.7.4, barrier S-344 located along the edge of shoulder with a length and average height of 6,480 feet and 14 feet, would reduce noise levels by 5 to 10 dB for 138 residences. Barrier S-353 with a length and average heights of 3,700 feet and 14 feet, would reduce noise levels by 5 to 11 dB for 38. Please see response to comment C-3 of this letter for more information relating to barriers S-353 and S-344.</p> <p>Based on the results of the soundwalls surveys, 50% or more of benefited receptors that responded were in support of barriers S-344, S-353, S-396, and S-411. Therefore, in accordance with the 2011 Protocol, these barriers have been incorporated into the project design as abatement.</p> <p>The content in Section 2.2.7.3 of the FED has been updated to reflect the results of the sound surveys and Minimization Measure NOI-1 has been revised to provide that soundwalls S-310, S-344 S-353, and S-396, will be constructed before commencement of</p>

Comment 36B: Salvador and Elizabeth Lopez	
	heavy civil and structural work on the freeway in the areas where the sound walls will be constructed. Any work which would occur prior to construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.
1. Construction Noise	
<p>C-12 [There are numerous homes located very near the I-15 freeway within Area E, including the Lopez's home at M-108. The MND/EA finds that the worst-case construction noise impacts of the Project would be 91 dBA Lmax at 50 feet from the active construction area. Despite this, the MND/EA concludes that construction noise impacts, which could last for up to five years, are temporary and thus not a significant impact.</p>	<p>C-12 As stated in the Environmental Document, Section 1.6 Project Description, the length of construction of the project in its entirety would only be 3 years, from 2021 to 2024. Additionally, construction would be linear, moving along the alignment and therefore would not occur at any given location for the entirety of the overall construction time frame. Therefore, construction in any one area will be periodic.</p> <p>In addition, the project will not include pile driving in areas where noise- sensitive receptors are located, to the extent possible. Cast-In-Drilled Hole (CIDH) piles will be used in bridge construction in the project limits with sensitive receptors starting at Foothill Boulevard and extending to the northern limit of the project, with the exception at Victoria Street Undercrossing, and the Cherry Avenue Undercrossing. due to the unsuitable soil conditions. The CIDH piles uses construction methods that minimize construction related noise and vibration compared to driven piles. CIDH piles require the use of an auger drill rig which produces noise</p>

Comment 36B: Salvador and Elizabeth Lopez	<p>levels of approximately 85 dBA (Lmax) at a distance of 50 feet. (Road Construction Noise Model (RCNM) 2006)</p> <p>To reduce noise from construction, MR-4 states: “Noise Section 2.2.7.3 Environmental Consequences (Temporary) of the Environmental Document indicates that the project is required to comply with Caltrans Standard Specification (SS) 14-8.02. SS 14-8.02, which requires ‘the project not to exceed 86 dBA Lmax at a distance of 50 feet from the job site between the hours of 9 p.m. to 6 a.m.”</p> <p>As noted in Section 2.2.7.3 Environmental Consequences (Temporary), the contractor will, as practicable and applicable, implement additional noise reducing measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work and installing acoustic barriers around stationary construction noise sources, as applicable in order to achieve compliance with noise requirements.” These types of additional noise reduction measures will be applied in areas where noise sensitive receptors are located and where it is determined that construction noise would exceed the 86 dBA Lmax standard. These measures would help reduce the predicted construction noise levels and allow that the project to comply with the requirements of SS 14-8.02. For the two locations where pile driving would be necessary, noise sensitive receptors are located at least 500 feet from the location where pile driving would occur. Pile driving</p>
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Comment 36B: Salvador and Elizabeth Lopez	
	<p>driving would occur. Pile driving will not occur between the hours of 9 PM and 6 AM, minimizing the potential for noise impacts related to pile driving.</p> <p>In addition, the Design-Builder will be required to comply with minimization measure NOI-1 as included in the FED page 2-441, which will also reduce the noise impacts associated with the construction activities of the Express Lanes.</p> <p>NOI-1 states: “The Design-Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.”</p>
<p>C-13 There are several problems with this conclusion. First, it appears that 91 dBA Lmax is an underestimation of the construction noise that will result from this project. Pile driving equipment can produce up to 96 dBA Lmax at 50 feet from the Project site. The MND/EA claims at this time pile driving is not anticipated, but it could be a part of the Project. (MND/EA p. 3-22.) The home at M-108 is located very near the I-15 bridge over Etiwanda Avenue. This bridge will need to be widened as part of the</p>	<p>C-13 The project will not include pile driving in areas where noise- sensitive receptors are located. This includes the bridge structures located in close proximity to M-108. Cast-In-Drilled Hole (CIDH) piles will be used in bridge construction in the project limits with sensitive receptors starting at Foothill Boulevard and extending to the northern limit of the project, with the exception at Victoria Street Undercrossing, and the Cherry</p>

Comment 36B: Salvador and Elizabeth Lopez	
<p>Project and the use of pile driving equipment is typical for the construction of bridge structures.</p>	<p>Avenue Undercrossing due to the unsuitable soil conditions. The CIDH piles use construction methods that minimize construction related noise and vibration compared to driven piles. CIDH piles require the use of an auger drill rig which produces noise levels of approximately 85 dBA (Lmax) at a distance of 50 feet. (Road Construction Noise Model (RCNM) 2006) For the two locations where pile driving would be necessary, noise sensitive receptors are located at least 500 feet from the location where pile driving would occur. Pile driving will not occur between the hours of 9 PM and 6 AM, minimizing the potential for noise impacts related to pile driving. (Please also see response to C-12 above.)</p>
<p>C-14 It is also unclear whether the 91 dBA Lmax takes into consideration the cumulative noise that would be generated by the operation of several different pieces of equipment at the same time, as is typical on this type of construction site. Thus, the MND/EA fails to disclose the full impact of the Project on this neighborhood.</p>	<p>C-14 Table 2-80 in Section 2.2.7.3 of the FED (page 401) shows the typical range of noise levels from construction equipment. The statement on page 401 is indicating that “[t]ypical noise levels at 50 feet from an active construction area could reach 91 dBA Lmax during the noisiest construction phases” factors in multiple pieces of equipment. The phrase “active construction noise” as used in Table 2-80 represents a cumulative noise level taking into account the noise generated from all construction equipment used during construction. Nevertheless, to further reduce noise levels, the FED identifies minimization measure NOI-1, (page 2-441) which states: “The Design-BUILDER will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.”</p> <p>Additionally, pursuant to standard specification SS 14-8.02, the Design-Builder will be required to monitor and control noise to not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 PM and 6:00 AM.</p>
<p>C-15 [Additionally, the MND/EA does not identify the boundaries of the active construction area, although it can be assumed that at a minimum it is the area of the existing freeway. The home at M-108 is located less than 200 feet from the I-15 freeway. It is typical for noise levels to reduce by three to six decibels per doubling of distance from the source. Thus, noise levels at a home that is less than 200 feet from the noise source would be more than between 79 and 85 decibels if 91 dBA is used, or more than between 84 and 90 if pile driving equipment is used. These are significant noise levels that require mitigation.</p>	<p>C-15 Please see MR-4 for discussion regarding pile driving. As CIDH piles would be included as opposed to driving of piles, noise levels would not exceed the 86 dBA Lmax construction threshold at a distance of 50 feet. The comment addresses the rate at which noise levels from construction equipment point sources are reduced over a distance. While the commenter references a 3 to 6 dB reduction, 6 dB reduction is the proper metric for point sources according to the guidance in Caltrans’ Noise Study Report Annotated Outline. Accordingly, noise from CIDH piles would be 74 dBA Lmax at a distance of 200 feet, based on an assumption that no shielding was provided by local topography or intervening structures or barriers. However, the FED identifies minimization measure NOI-1 on page 2-448, which states: “The Design-</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.” As such, construction noise levels would be further reduced and impacts would not be significant.</p>

<p>C-16 Adding to the significance of these noise levels is that they will often be produced at nighttime. While the MND/EA acknowledges that a substantial amount of nighttime work would be included in the Project, it fails to analyze the sleep disturbance impacts this construction noise would have on the many residents living (and sleeping) near the Project site.</p>	<p>C-16 SS 14-8.02 states “Monitor and control noise to not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 PM and 6:00 AM. Noise from construction would reduce at a rate of 6 dB per doubling distance (for a noise level of 86 dB at 50 feet, noise would reduce to 80 dB at 100 feet, 74 dB at 200 feet, etc.). As discussed, CIDH piles would be used for construction which would minimize construction related noise. CIDH piles require the use of an auger drill rig which produces noise levels of approximately 85 dBA (Lmax) at a distance of 50 feet. (RCNM 2006) These types of additional noise reduction measures will be applied in areas where noise sensitive receptors are located and where it is determined that construction noise would exceed the 86 dBA Lmax standard. As CIDH piles would be included as opposed to driving of piles, noise levels would not exceed the 86 dBA Lmax construction threshold at a distance of 50 feet.</p> <p>Furthermore, the FED identifies minimization measure NOI-1 on page 2-448, which states: “The Design-Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as;</p>
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Comment 36B: Salvador and Elizabeth Lopez	
	clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.” This would reduce noise from any night-time construction further.
<p>C-17 The MND/EA’s conclusion that construction noise impacts are less than significant also fails to take into consideration the City of Rancho Cucamonga’s noise ordinance. The MND/EA relies on compliance with Caltrans Standard Specification 14-8.02 to support the finding of less than significant, but this standard is much more permissive in allowing construction noise than Rancho Cucamonga’s noise ordinance. The Caltrans Standard Specification limits construction noise to 86 dBA Lmax at 50 feet from the Project site between the hours of 9 p.m. and 6 a.m.</p> <p>The MND/EA includes no method for reducing the predicted construction noise levels of up to 96 dBA Lmax at 50 feet from the Project site down to 86 dBA. Moreover, the MND/EA does not address Rancho Cucamonga’s noise ordinance. This noise ordinance prohibits construction activities between the hours of 8 p.m. and 7 a.m. and on Sundays or holidays. (Rancho Cucamonga Municipal Code (RCMC) 17.66.050.D.4.) Construction noise activities are otherwise exempt from noise standards as long as the noise levels created do not exceed 65 dBA when measured at the residential site’s property line. (Ibid.) The Project would not comply with these standards and thus results in a significant adverse construction noise impact that requires mitigation.</p>	<p>C-17 Caltrans must comply with Caltrans SS 14-8.02 noise requirements within the ROW. Local ordinances do not apply to Caltrans for work it undertakes within its ROW. However, any work outside Caltrans’ ROW will comply with the local jurisdictions’ applicable noise ordinances.</p> <p>The FED identifies minimization measure NOI-1 on page 2-441 which states: “The Design-Builder will complete construction of all soundwalls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway, between Foothill Boulevard Undercrossing and Victoria Street Undercrossing, to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors.” Inclusion of this minimization measure will substantially contribute to reducing noise levels to the greatest extent practical. The Design-Builder will be required to comply with Standard Specification Special Provisions 14-8.02, which addresses noise requirements within state right of way. This specification states the Design-Builder must “[m]onitor and control noise to not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 PM and 6:00 AM.” Local jurisdictional ordinances are not applicable within state right of way. Nevertheless, construction work occurring outside the state right of</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>way will comply with the local jurisdictions' noise ordinances. Construction which would occur outside of the Caltrans ROW includes staging areas located by the Arrow undercrossing within the City of Rancho Cucamonga. No noise sensitive receptors are located at these locations and construction from the project would not exceed the 65 dBA threshold. Additionally, any movement of construction equipment which would occur between the hours of 8 PM and 7 AM would only result in a brief increase in noise which would not violate the City's municipal code.</p>
2. Operational Noise.	
<p>C-18 Operational noise impacts of the Project would also be significant in Area E. The MND/EA sets an unsupported significance threshold for operational noise, claiming impacts would only be significant if the Project increased noise levels by more than 12 decibels. This threshold is untenable because an increase of only 10 decibels results in humans experiencing noise as twice as loud. Thus, the MND/EA would only consider noise impacts to be significant if they are more than twice as loud as existing noise levels. That is an extreme requirement that does not adequately protect the communities surrounding the freeway.</p>	<p>C-18 The analysis of the operational impacts was conducted using the Caltrans Traffic Noise Analysis Protocol (Caltrans Protocol) and Caltrans Technical Noise Supplement (TeNS), and is consistent with the requirements of 23 CFR 772. NEPA requires that the thresholds outlined by 23 CFR 772 (approaching or exceeding the land use activity category NACS or a 12 dB or greater substantial increase) are analyzed to identify impacts. Results included in Chapter 2.2.7.3 of the environmental document show that the project would result in noise levels approaching or exceeding the noise abatement criteria at land use category B (NAC 67 dBA Leq (h)), land use category C (NAC 67 dBA Leq (h)), and land use category E (72 dBA Leq (h)) land uses. Results shows that the predicted noise increase would be no greater than 6 dB. Therefore, no modeled receptor would exceed the 12 dB substantial increase threshold.</p>

Comment 36B: Salvador and Elizabeth Lopez	
<p>C-19 [Additionally, this threshold fails to consider whether the impacts would be cumulatively significant. When an existing noise level exceeds noise standards, any increase should be considered a significant impact. (Los Angeles Unified School Dist. v. City of Los Angeles (1997) 58 Cal.App.4th 1019, 1024-1025.)</p>	<p>C-19 As discussed in Section 2.4.3.6 of this document, the cumulative noise impact analysis indicates that changes in traffic noise levels between existing and future with-project conditions at noise-sensitive receptors would range from a 7-decibel (dB) decrease to a 6-dB increase. These increases include the cumulative effects of other projects located along the I-15 alignment, such as the Baseline Interchange Improvements Project, the I-10 Corridor Project, and the North Duncan Canyon Interchange Project, which were all included in the traffic noise analyses and modeling for the I 15 CP.</p> <p>In comparing the design year Build Alternative condition (which includes the proposed project, all reasonably foreseeable projects [I-15/Baseline IC Project, I-15 Duncan Canyon IC Project, RCTC I-15 Tolled Express Lanes Project, and I-10 Corridor Project], and all other projects included in the traffic study) to the design year No Build Alternative condition (which includes all reasonably foreseeable projects [I-15/Baseline IC Project, I-15 Duncan Canyon IC Project, RCTC I-15 Express Lanes Project, and I-10 Corridor Project] and all other projects included in the traffic study), the change in noise ranges from -3 to 4 dBA.</p> <p>An increase of 3 or 4 dBA is considered to be barely perceptible to the human ear, while an increase of 5 dBA is generally perceived as a distinctly noticeable increase. Decreases in traffic noise associated with the proposed project are generally associated with the alteration of the surrounding geometry between the I-</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>15 (source) and the modeled receptors. Examples of this type of alteration would be the construction of retaining walls and safety shapes or noise barriers included by the I-15/ Baseline Interchange Improvements Project. It is expected that the I-15 CP will not result in a cumulatively considerable contribution to noise impacts.</p>
<p>C-20 [The MND/EA also fails to consider the Project's compliance with Rancho Cucamonga's noise ordinance in assessing operational noise impacts. The residential noise standards for the City are 65 dBA between 7 a.m. and 10 p.m. and 60 dBA between 10 p.m. and 7 a.m. The Project would result in an exceedance of this standard at many residences, or in an increase in existing exceedances of this standard.</p>	<p>C-20 Caltrans is the lead agency for purposes of CEQA and NEPA. As such, Caltrans must comply with the requirements of 23 CFR 772 and the Caltrans Protocol. The NSR identifies impacts based on the land use activity category and the Noise Abatement Criteria included in Table 1 of the Caltrans Protocol and included in the NSR in Chapter 4 Table 4-1 and the ED as Table 2-68. Table 2-81 in the Noise Section 2.2.7.4 Avoidance, Minimization, and/or Abatement Measures, shows that the 14-foot soundwalls (S-344 and S-353) have been analyzed for compliance with the requirements of the Caltrans Protocol and 23 CFR 772 and meet the feasibility and reasonableness requirement for inclusion as abatement as part of the project.</p> <p>Additionally, the Design-Builder will be required to comply with Standard Special Provisions 14-8.02, which addresses noise requirements within state right of way. This specification states the Design-Builder must "[m]onitor and control noise to not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 PM and 6:00 AM." Local ordinances do not apply to Caltrans for work it undertakes within its ROW. However, any work outside Caltrans' ROW will comply with the local jurisdictions' applicable noise ordinance. Construction</p>

Comment 36B: Salvador and Elizabeth Lopez	
	<p>which would occur outside of the Caltrans ROW includes staging areas located by the Arrow undercrossing within the City of Rancho Cucamonga. As no noise sensitive receptors are located at this location, the 65 dBA threshold outlined in the City of Rancho Cucamonga ordinance would not be applicable. Additionally, any movement of construction equipment which would occur between the hours of 8 PM and 7 AM would only result in a brief increase in noise which would not violate the City's municipal code.</p>
<p>C-21 Further, the noise measurements and predictions included in the MND/EA do not differentiate between daytime and nighttime noise levels. This must be analyzed and disclosed as well. Moreover, the installation of a 14-foot-tall soundwall would reduce the noise impact at all locations in Area E to at or below 65 dBA as required by the City.</p>	<p>C-21 The noise impacts analysis was performed in accordance with the requirements of 23 CFR 772, which states: "Traffic noise impacts [...] occur when the predicted noise level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified in 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). Noise levels are expressed in terms the A-weighted decibel (dBA) and the one-hour equivalent sound level (Leq[h]). The NSR prepared for this project analyzed the peak noise hour (Leq[h]) which was identified as occurring during the AM time frame (based on the long term measurements included in the FED [Table 2-70] and the NSR. Noise levels during the peak hour represent the "worst noise hour" (within a typical 24-hour period), which is a predicted highest noise level. Table 2-81 shows the predicted "worst noise hour" calculated for the project which includes the results for Area E. The result of analysis including the soundwall surveys are included in comment C-2 above.</p>

Comment 36B: Salvador and Elizabeth Lopez

C-22	<p>The MND/EA also fails to assess the Project's consistency, or lack thereof, with Rancho Cucamonga General Plan policies intended to protect residents from excessive noise levels:</p> <ul style="list-style-type: none"> • Policy PS-13.3: Consider the use of noise barriers or walls to reduce noise levels generated by ground transportation noise sources and industrial sources. <ul style="list-style-type: none"> ○ While soundwalls are considered for the Project, as discussed below, the MND/EA fails to include them as fully enforceable mitigation measures. • Policy PS-13.4: Require that acceptable noise levels are maintained near residences, schools, health care facilities, religious institutions, and other noise sensitive uses in accordance with the Development Code and noise standards contained in the General Plan. <ul style="list-style-type: none"> ○ As discussed above, the MND/EA fails to consider the City's noise standards and the Project fails to comply with these standards. • Policy PS-14.1: Consult with Caltrans and other regional agencies to minimize the impact of transportation-related noise, including noise associated with freeways, major arterials, and rail lines. <ul style="list-style-type: none"> ○ Caltrans must consult with the City of Rancho Cucamonga as part of the Project review process. 	<p>C-22 Caltrans has fully assessed the project's consistency with applicable land use policies. As specifically raised by the commenter:</p> <p>Policy PS 13.3 - Table 2-81 in the Noise Section 2.2.7.4 Avoidance, Minimization, and/or Abatement Measures, show that the 14-foot sound walls (S-344 and S-353) have been analyzed for compliance with the requirements of the Caltrans Protocol and 23 CFR 772 and meet the feasibility and reasonableness requirement for inclusion as abatement as part of the project. These soundwalls are identified as part of the project's design elements in Section 1.6 Project Description and in Table 1-11, Soundwalls, and shown on Figure 1-6 Alternative 2 (Build Alternative) as part of the project's features. PS-13.4: As Caltrans is the lead CEQA and NEPA agency (as an extension of FHWA), Caltrans must comply with the requirements of 23-CFR-772 and the Caltrans CEQA thresholds which are outlined in the Caltrans Protocol and in Table 2-68, Noise Abatement Criteria, of the FED. The NSR identifies impacts based on the land use activity category and the Noise Abatement Criteria included in Table 1 of the Caltrans Protocol and included in the NSR in Chapter 4 Table 4-1 and the FED as Table 2-68. Table 2-81 in the Noise Section 2.2.7.4 Avoidance, Minimization, and/or Abatement Measures, show that the 14-foot soundwalls (S-344 and S-353) have been analyzed for compliance with the requirements of the Caltrans Protocol and 23 CFR 772 and meet the feasibility and reasonableness</p>
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Comment 36B: Salvador and Elizabeth Lopez	
	<p>requirement for inclusion as abatement as part of the project.</p> <p>Additionally, the FED identifies minimization measure NOI-1 which states: The Design-Builder will complete construction of all soundwalls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors.”</p> <p>Policy PS-14.1: During the project development process, the City of Rancho Cucamonga staff were members of the Project Development Team, and attended its regular meetings. Caltrans coordinated with the City of Rancho Cucamonga as to the location and extent of the barriers, as well as other preliminary design plans within the City limits. Other Coordination included stage construction, detours, and project schedule.</p>

Comment 36B: Salvador and Elizabeth Lopez

<p>C-23 [The analysis of operational noise impacts is also inadequate because it relies on monitoring that only uses A-weighted noise measurements on a slow setting. If a constant measurement and fast settings on the monitoring equipment were to be used, the measured noise levels would be significantly higher. This type of measurement would provide a more accurate assessment of the noise levels experienced by residents.</p>	<p>C-23 The Caltrans TeNS discusses A-Weighted noise measurements. Under 3.5.3 Measurements: “The frequency weighting should be set on ‘A’. The proper response setting should be set at ‘fast’ or ‘slow.’ ‘Slow’ is typically used for traffic noise measurements.” Slow response time is more appropriate for traffic noise measurements which is a constant noise source, where as “fast” response time is more appropriate for instantaneous noise events such as blasting.</p> <p>The TeNS also states: “A-Weighted Sound Level: Expressed in dBA or dB(A); is a frequency-weighted sound pressure level approximating the frequency response of the human ear. It is defined as the sound level in decibels measured with a sound level meter having the metering characteristics and a frequency weighting specified in the American National Standards Institute Specification for Sound Level Meters, ANSI S 1.4–1983. The A-Weighting de-emphasizes lower frequency sounds below 1,000 Hz (1 kHz) and higher frequency sounds above 4 kHz. It emphasizes sounds between 1 and 4 kHz. A-weighting is the most commonly used measure for traffic and environmental noise throughout the world.” As A-weighting most accurately approximates the frequency response to the human ear, it is the appropriate weighting curve to be used.</p>
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Comment 36B: Salvador and Elizabeth Lopez

<p>C-24 [Further, the MND/EA fails to analyze the health impacts associated with operational (and construction) noise impacts. According to the U.S. Environmental Protection Agency, exposure to high noise levels presents a “health risk in that noise may contribute to the development and aggravation of stress related conditions such as high blood pressure, coronary disease, ulcers, colitis, and migraine headaches...Growing evidence suggests a link between noise and cardiovascular problems. There is also evidence suggesting that noise may be related to birth defects and low birth-weight babies. There are also some indications that noise exposure can increase susceptibility to viral infection and toxic substances.”¹</p> <p>Potentially deadly cardiovascular impacts can be triggered by long-term average exposure to noise levels as low as 55 decibels.² Exposure to even moderately high levels of noise during a single 8-hour period triggers the body’s stress response. In turn, the body increases cortisol production, which stimulates vasoconstriction of blood vessels that results in a five to ten-point increase in blood pressure. Over time, this noise-induced stress can result in hypertension and coronary artery disease, both of which increase the risk of heart attack death.³ Studies on the use of tranquilizers, sleeping pills, psychotropic drugs, and mental hospital admission rates suggest that high noise levels cause adverse impacts on mental health.</p>	<p>C-24 The project is subject to the requirements of 23 CFR 772.</p> <p>As stated in 23 CFR 772.1, the purpose of 23 CFR 772 is “To provide procedures for noise studies and noise abatement measures to help protect the public’s health, welfare and livability, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to title 23 U.S.C.”</p> <p>The requirements of 23 CFR 772 state “Traffic noise impacts . . . occur when the predicted noise level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified in 23CFR772, or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase). Noise levels are expressed in terms of the A-weighted decibel (dBA) and the one-hour equivalent sound level (Leq[h]). The NSR analyzes the peak noise hour (Leq[h]) which was identified as occurring during the AM time frame (based on the long-term measurements included in the FED [Table 2-70] and the NSR. Noise levels during the peak hour represent the “worst noise hour” which is a predicted highest noise level.</p>
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¹ EPA Noise Effects Handbook, <http://www.nonoise.org/library/handbook/handbook.htm>, incorporated by reference; see also EPA Noise: A Health Problem <http://www.nonoise.org/library/epahlth/epahlth.htm#heart%20disease>, incorporated by reference.

² <http://whqlibdoc.who.int/hq/1999/a68672.pdf> [finding demonstrated cardiovascular impacts, including ischemic heart disease and hypertension after long-term exposure to 24-hour average noise values of 65-70 dBA], incorporated by reference.

³ WHO, Guidelines for Community Noise, p. x and pp. 47-48. The report is available in its entirety online at <http://whqlibdoc.who.int/hq/1999/a68672.pdf> and incorporated by reference; see also, Maschke C (2003). “Stress Hormone Changes in Persons exposed to Simulated Night Noise”. Noise Health 5 (17): 35-45. PMID 12537833, <http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2002;volume=5;issue=17;spage=35;epage=45;aulast=Maschke>, incorporated by reference.

Comment 36B: Salvador and Elizabeth Lopez	
High noise levels also have dramatic developmental impacts on small children, many of whom might one day reside in the Project. Children who are exposed to higher average noise levels have heightened sympathetic arousal, expressed by increased stress hormone levels, and elevated resting blood pressure. Without mitigation, the Project would expose community members to levels of noise that are unsafe for cardiovascular health, mental health, societal well-being, and child development	See response to comment C-2 for discussion of soundwalls being constructed as abatement for the project.
3. Deferred Mitigation	
<p>C-25 As set forth above, the Project would result in significant construction and operational noise impacts. The MND/EA demonstrate that soundwalls S-353 and S-344 at a height of 14 feet would mitigate the operational impacts of the Project for numerous members of this community. The MND/EA does not estimate the reductions to construction noise impacts that would result from the installation of these soundwalls prior to other construction activities, but they would clearly reduce the significant construction noise levels.</p>	<p>C-25 The FED identifies minimization measure NOI-1 which requires the Design-Builder to complete construction of all soundwalls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior to the construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.</p> <p>Additionally, the DED also identified in Section 2.2.7.3 Environmental Consequences (Temporary), that “the Design- Builder would be required to monitor and control noise to not exceed 86 dBA at 50 feet from the job site between the hours of 9:00 PM and 6:00 AM. in accordance with their contract. The contractor will, as practicable and applicable, implement</p>

Comment 36B: Salvador and Elizabeth Lopez	
	additional noise reducing measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work and/or installing acoustic barriers around stationary construction noise sources as necessary in conformance with applicable requirements.”
<p>C-26 [Instead of committing to the inclusion of the soundwalls, and the construction of these soundwalls prior to other construction activities, the MND/EA states that “These measures may change based on input received from the public. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.” (MND/EA p. 2-419.)</p> <p>Additionally, at the public meeting on the I-15 Corridor Project, the Lopez’s family members were informed by Caltrans staff that a decision on whether these soundwalls will be constructed or not, and what height they will be, will not be made until after the approval of the Project. Caltrans “cannot rely upon post approval mitigation measures adopted during the subsequent design review process. Such measures will not validate a negative declaration.” (Quail Botanical Gardens Foundation, Inc. v. City of Encinitas (1994) 29 Cal.App.4th 1597, 1606. fn 4.) Leaving a determination regarding whether the soundwalls will be installed and, if so, what height they will be until after project approval violates CEQA.</p>	<p>C-26 Section 2.2.7.3 identifies soundwalls that satisfied both applicable cost and noise reduction criteria requirements. Based on the soundwall surveys sent on March 21, 2018, to all benefited receptors, soundwalls S-344, S-353, S-396, and S-411 received a sufficient level of support and will be constructed as part of this project. See Table 2-81 for specific information on the height of soundwalls S-344, S-353, S-396, and S-411. The content in Section 2.2.7.3 of the FED has been updated to reflect the results of the sound surveys and Minimization Measure NOI-1 has been revised to provide that soundwalls S-310, S-344 S-353, and S-396, will be constructed before commencement of heavy civil and structural work on the freeway in the areas where the sound walls will be constructed. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.</p>

Comment 36B: Salvador and Elizabeth Lopez	
C-27	<p>To inform Caltrans of the public support for these soundwalls, the Lopezes have prepared a petition that they are circulating to neighbors that will also be impacted by the Project. They have obtained signatures from more than 140 residents in favor of 14-foot- tall soundwalls in just a short amount of time.</p> <p>C-27 Please see response to comment C-7 of this letter regarding the petition. The public support of the planned soundwalls expressed in the petition is recognized.</p>
C-28	<p>In addition to the noise reduction benefits of the soundwalls, these 14-foot walls would also reduce safety hazards associated with the freeway. It is common for debris from vehicles traveling on the I-15 to fall onto the adjacent residential property and surface streets. Constructing these walls would serve as a barrier to prevent this safety impact. It is also important that the soundwalls be constructed prior to other construction work to contain debris from construction activities and not allow it onto adjacent property or the roadway below the Etiwanda Avenue Bridge, potentially injuring residents and motorists.</p> <p>Finally, with regard to the construction of the soundwalls, it is our understanding that Caltrans has constructed soundwalls prior to construction activities for several other freeway projects in the area, including the I-10 Corridor Project and the I-405 Sepulveda Pass Project. We urge Caltrans to avoid environmental justice concerns and provide this neighborhood the same mitigation it has provided to other higher-income neighborhoods.</p> <p>C-28 Please see response to comment C-3 of this letter.</p>

Comment 36B: Salvador and Elizabeth Lopez	
4. Groundborne Vibration Impacts.	
<p>C-29 [The MND/EA concludes without adequate analysis that groundborne vibrations would be less than significant. There is no study of groundborne vibrations in this document or its appendices. The MND/EA's claim that any groundborne noise or vibration would be limited to the construction period and would be short in duration does not reduce this impact to a less than significant level. As stated above, the construction period is five years, which is a substantial amount of time to experience such impacts.</p> <p>[Further, groundborne vibrations, even for a short period of time, can have significant impacts on the structural integrity of nearby buildings. The MND/EA must analyze this potentially significant impact.</p>	<p>C-29 CIDH piles would be used in place of vibration intensive impact pile driving in bridge construction within the project limits starting at Foothill Boulevard and extending to the northern limit of the project with the exception of Victoria Street Undercrossing, and the Cherry Avenue Undercrossing due to unsuitable soil conditions. Vibration levels identified in the FTA Noise and Vibration manual identify that (caisson) drills, which are similar to auger drills, would produce 0.089 Peak Particle Velocity (PPV) at a distance of 25 feet, which would be below the level of damage for buildings which are considered extremely susceptible to vibration damage (0.12 PPV). As any land uses susceptible to vibration impacts would be more than 25 feet from construction equipment, vibration would not result in an impact. (FTA 2018)</p> <p>In general, literature on the subject shows that only blasting, pile driving, and pavement breaking have documented examples of potential damage to buildings (American Association of State Highway and Transportation Officials [AASHTO] 1990). For pile driving and pavement breaking, the potential for damage from vibration is at locations in relatively close proximity to the activity. The closest structure (located approximately 350 feet) would be located at the Cherry Avenue undercrossing. Vibration Peak Particle Velocity (PPV) would reduce at a rate of $PPV_{ref} \times (25/D)^N \times (E_{equip}/E_{ref})^{0.5}$, where:</p> <p>$PPV_{ref} = 0.65$ inches/sec at a reference distance of 25 ft,</p>

Comment 36B: Salvador and Elizabeth Lopez

D = distance from the pile driver,

N = 1.1 is the value related to attenuation of vibration throughout the ground,

Eref = 36,000 foot-lb (rated energy of reference pile driver),

Eequip = rated energy of impact pile driver in ft-lbs (assumed same as reference). Vibration levels would be on the order of 0.03 PPV. (Caltrans 2013)

As such, vibration from construction would be well below the 0.12 PPV damage potential for extremely vibration susceptible buildings referenced in the FTA noise and vibration manual. Therefore, no vibration study was necessary and the CEQA vibration section was updated to reflect this information

If changes occur during the Design Build phase requiring the use of pile driving instead of CIDH vibration in the areas as described above, additional environmental review would be required to confirm that vibration impacts would not occur.

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- FTA. 2018. *Transit Noise and Vibration Impact Assessment*. Final. FTA-VA-90-1003-06. Washington, DC. Prepared for Federal Transit Administration Washington DC.
 - Caltrans. 2013. *Transportation and Construction Vibration Guidance Manual*. Final. CT-HWANP-RT-13-069.25.3. Sacramento CA. Prepared for California Department of Transportation Sacramento CA.

Comment 36B: Salvador and Elizabeth Lopez	
Greenhouse Gas Emissions	
C-30	<p>The MND/EA's analysis of climate change impacts fails to induced travel impacts associated with this type of project. As found by several recent studies, freeway projects that expand the capacity of a roadway result in an increase in greenhouse gas emissions because they encourage additional travel:</p> <p>Reducing traffic congestion is often proposed as a solution for improving fuel efficiency and reducing greenhouse gas (GHG) emissions. Traffic congestion has traditionally been addressed by adding additional roadway capacity via constructing entirely new roadways, adding additional lanes to existing roadways, or upgrading existing highways to controlled-access freeways. Numerous studies have examined the effectiveness of this approach and consistently show that adding capacity to roadways fails to alleviate congestion for long because it actually increases vehicle miles traveled (VMT).</p> <p>(http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf, incorporated by reference; see also https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf, incorporated by reference.) These significant impacts must be analyzed and mitigated.</p>
	<p>C-30 For the discussion on climate change, please see Section 3.2 of the Environmental Document. GHG emissions resulting from both short-term construction and long-term operations were quantified in Section 3.2.3.</p> <p>As discussed therein, the quantification of GHG emissions for long-term operations is based on vehicle miles traveled (VMT) and speed profiles within the project area along with EMFAC2014 emission rates (within the CT EMFAC model), which were the basis for estimating CO₂ equivalent (CO₂e) emissions under the Baseline/Existing Year 2014, Opening Year 2024, and Horizon Year 2045 conditions. The VMT data and speed profile data were developed using the San Bernardino Transportation Analysis Model (SBTAM), which takes into account future land use and roadway network assumptions, as well as the traffic redistribution effects of improvements in roadway operations. As shown in Table 3-1, VMT and associated GHG emissions would be greater under the Build Alternative than under the No Build Alternative at Opening Year 2024 and Horizon Year 2045.</p> <p>As part of the requirements of SB 375, the California Air Resources Board (CARB) has set per-capita GHG reduction targets for 2020 and 2035 for the SCAG region that the SCAG 2016-2040 RTP/SCS has been developed to meet. As discussed in Section 3.2, the project is identified in the SCAG 2016-2040 (RTP/SCS) under project number 4122006. The</p>

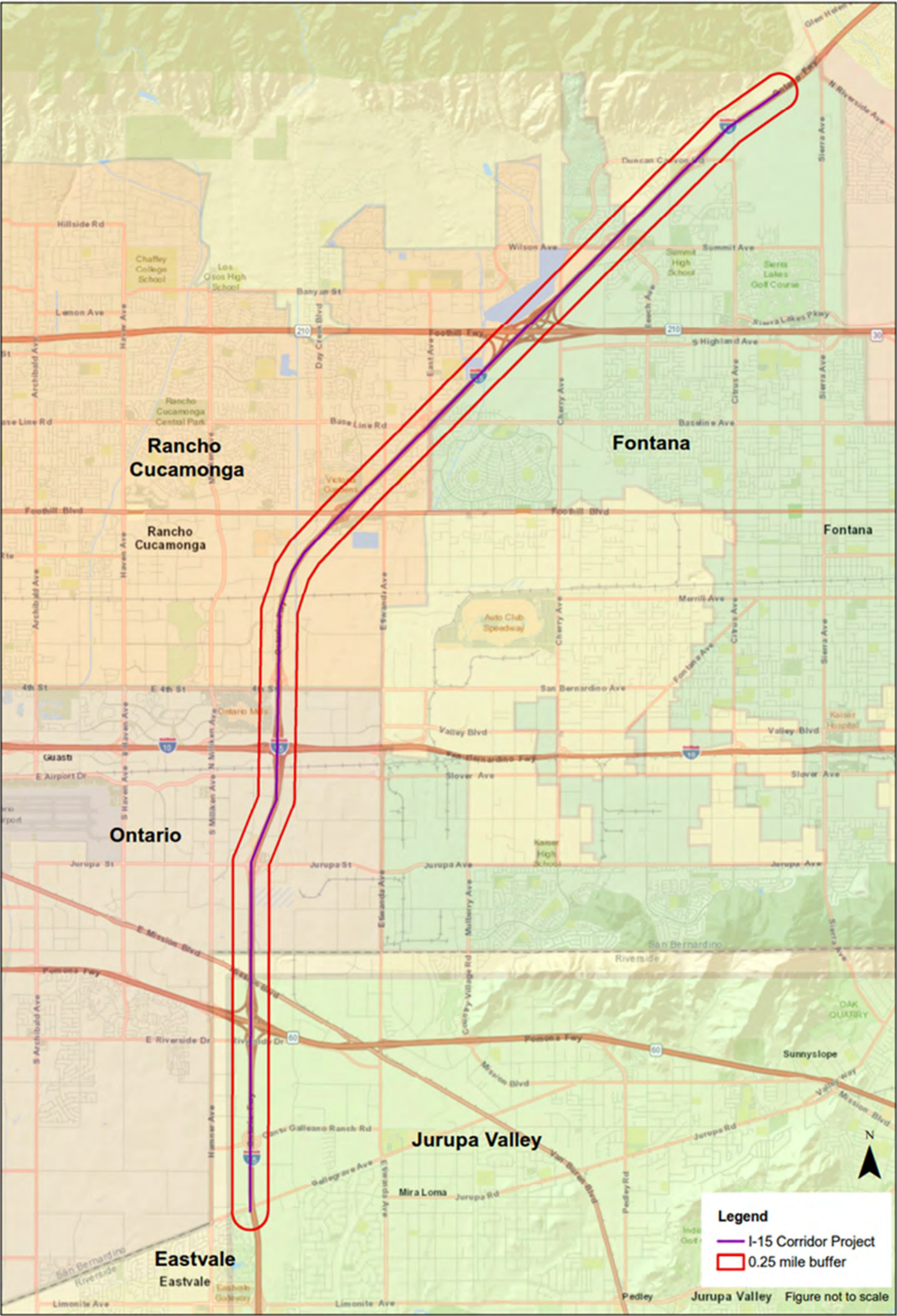
Comment 36B: Salvador and Elizabeth Lopez

4122006. The SCAG 2016–2040 RTP/SCS includes several major initiatives that the project would either directly implement, or would support, including the RTP/SCS initiatives to improve highway and arterial capacity through the implementation of Express Lanes, demand management by encouraging modes other than single-occupancy vehicles, dynamic corridor congestion management, and the SCAG Congestion Management Program (CMP). Each of these initiatives would contribute to RTP/SCS implementation, the GHG reduction target, which is 18 percent per capita, relative to a 2005 baseline by 2035. This target surpasses the target developed for the SCAG region by CARB as part of SB 375.

Caltrans has used the best available information based on scientific information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. In addition to the project complying with existing rules regarding the control of pollutants, the project would implement measures to reduce potential greenhouse gas effects as outlined in the Climate Change Section 3.2.

Comment 36B: Salvador and Elizabeth Lopez	
<p>Conclusion</p> <p>C-31 [For all of these reasons, we urge you to prepare a full EIR/EIS to ensure that any proposed project is sensitive to the surrounding community. Thank you for your time and consideration in this matter.</p>	<p>C-31 The commenter's request that Caltrans prepare a full EIR/EIS is noted. The project impacts to the surrounding communities were evaluated in the Draft Environmental Document. Additional analysis regarding noise impacts was conducted in response to the public comments and included in the FED in the Noise Section 2.2.7.4 and described in the response to this letter and other public comments. Pursuant to Public Resource Code (PRC) §21080(c), PRC § 21082.2 and 14 California Code of Regulations (C.C.R) §15070, a Mitigated Negative Declaration is the appropriate document when: "The initial study identifies potentially significant effects, but: (1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment." The analysis of the potential project impacts was prepared based on the technical studies conducted for the project according to Caltrans Standard Environmental Reference guidance and requirements. A list of these studies is included in the Environmental Document Appendix E List of Technical Studies. As shown by the studies conducted for the project and used in the preparation of the CEQA evaluation provided in Chapter 3 of this Environmental Document, it is not anticipated that the project, as proposed and with the implementation of the identified avoidance, minimization, and mitigation measures, would result in significant and unavoidable impacts; therefore, an EIR is not required.</p>

Figure 4-2. Public Notice Distribution Limits



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Comment 37: Tracy Capps	
<p>From: Tressy Capps [mailto:tlc36c@hotmail.com] Sent: Friday, March 16, 2018 9:31 AM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Cc: tressy capps <tlc36c@gmail.com> Subject: Interstate 15 Corridor Project (please reply that you received) Importance: High</p> <p>Greetings.</p> <p>37-1 [As you endeavor to monetize the interstates in California I hope all those involved will reflect on this verse from the Holy Bible: Mark 8:36 "\"For what shall it profit a man, if he shall gain the whole world, and lose his own soul?\"</p> <p>Sincerely, Tressy Capps (951)333-2000 #TollFreeIE</p>	<p>Thank you for your comment.</p> <p>37-1 Caltrans and SBCTA are dedicated to providing a safe, sustainable, integrated, and efficient transportation system, and are at the same time dedicated to being responsible stewards for the public.</p> <p>The Express Lanes alternative is the only financially feasible alternative for improving travel conditions at the I-15 corridor in the project area. Please see. Master Response MR 2 Express Lanes Funding Cost to Users for information of the funding of the Express lanes and the cost to users.</p>

<p>Comment 38: Stephen Rogers</p>	
<p>From: Stephen Rogers [mailto:swr.engineer@gmail.com] Sent: Friday, March 16, 2018 5:00 PM To: Shankel, James A@DOT <james.shankel@dot.ca.gov> Subject: I15 Corridor Project Mitigated Negative Declaration/ Environmental Assessment</p> <p>Hello Mr Shankel (James)- The following public comments are hereby submitted to Caltrans and San Bernardino County Transportation Authority (sbcta) pertaining to the subject documents prepared under the requirements of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for the I15 Corridor Project:</p> <p>38-1 [1) The Draft Mitigated Negative Declaration / Environmental Assessment is inadequate under CEQA/NEPA for the review and analysis of the proposed Express Lanes project with regard to Air Quality/ Greenhouse Gas Emissions and Noise impacts which are significant and cannot be reduced to a level of insignificance through implementation of mitigation measures proposed with the proposed Mitigation Monitoring Plan and an EIR/ EIS accompanied by a Statement of Overriding Considerations is necessary to address the aignificant air quality/greenhouse gas emissions/ noise impacts associated with the proposed 50% increase in capacity to be added to the freeway within the project limits.</p>	<p>Thank you for your comment.</p> <p>38-1 The IS/EA is the appropriate document for this project. Master Response MR 3 provides and explanation regarding the preparation and adoption of an IS/MND for the project.</p> <p>Similarly, the Environmental Assessment (EA) document, combined with the IS, was prepared for the project in compliance with regulation 23 CFR 771.115 regarding the level of documentation required to establish the level of significant impacts under NEPA. Based on the technical studies and the and analysis of potential impacts, a Finding of No Significant Impacts is this project’s decision document for NEPA.</p> <p>Localized particulate matter (PM) and carbon monoxide (CO) analyses conducted for this project concluded that impacts to local air quality would be less than significant. The local CO and PM analyses are provided in Sections 2.2.6.3 under Localized Carbon Monoxide Hot-Spot Evaluation and Localized PM2.5 and PM10 Hot-Spot Evaluation respectively. In addition, the MSAT emissions analysis provided in Section 2.2.6.3 under Mobile Source Air Toxics, shows that all MSAT emissions at horizon 2045 would be less than current baseline levels. As discussed in Air Quality Section 2.2.6 and Section 3.2 Regarding meeting conformity requirements.</p> <p>A field investigation was conducted to identify land uses that could be subject to traffic and</p>

Comment 38: Stephen Rogers	
	<p>construction noise impacts from the project. Traffic and Transportation Section 2.1.9.3 indicates that the project is planned to address the existing and future traffic demand forecasted through the horizon year of 2045. The analysis shows that the travel demand will continue to grow within the project limits; however, Table 2-26 and Table 2-40 show that the traffic volume within the GP lanes will be less with the construction of the Express Lanes when compared with the No Build Alternative. In addition, the analysis shows that with the construction of the Express Lanes, the forecasted speed will experience improvement during the morning and evening peak hour periods within the project limits. Please see also Master Response R-1 for more information on the operational improvements resulting from the implementation of the project.</p>

Comment 39: Dan Titus, American Coalition for Sustainable Communities (ACSC)

From: inlandempire4u@gmail.com [mailto:inlandempire4u@gmail.com]
Sent: Friday, March 16, 2018 3:05 PM
To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
Subject: Dan Titus - ACSC Response to Interstate 15 Corridor Project

Date: March 16, 2018
To: James Shankel, Senior Environmental Planner, james.shankel@dot.ca.gov
From: Dan Titus, ACSC - FutureEarthUS@gmail.com
RE: ACSC Response to Interstate 15 Corridor Project

Good afternoon James,

Please confirm receipt of this email and the attached PDF
Regards,
Dan Titus

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Disclaimer: This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error, please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee, you should not disseminate, distribute or copy this email. Please notify the sender immediately by email if you have received this email by mistake and delete this email from your system. If you are not the intended recipient, you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

Thank you for your two emails on March 16, 2018 that included your comment letter. The comment letter and the response to the comments are included below.

Comment 39: Dan Titus, American Coalition for Sustainable Communities (ACSC)

From: FutureEarthUS [mailto:futureearthus@gmail.com]
Sent: Friday, March 16, 2018 2:58 PM
To: Shankel, James A@DOT <james.shankel@dot.ca.gov>
Subject: I-15 Project Response > Please confirm receipt of this email

Date: March 16, 2018
To: James Shankel, Senior Environmental Planner, james.shankel@dot.ca.gov
From: Dan Titus, ACSC - FutureEarthUS@gmail.com
RE: ACSC Response to Interstate 15 Corridor Project

Good afternoon James -

Please confirm receipt of this email and attached PDF of comments on the I-15 Project
Regards,
Dan Titus

--
the American Coalition for
Sustainable Communities (ACSC) - "Sustaining
representative government"

Comment 39: Dan Titus, American Coalition for Sustainable Communities (ACSC)



Date: March 15, 2018
To: James Shankel, Senior Environmental Planner, james.shankel@dot.ca.gov
From: Dan Titus, ACSC - FutureEarthUS@gmail.com
RE: *ACSC Response to Interstate 15 Corridor Project*

If you wish to make a comment on the document, please submit your comments in writing no later than Friday, March 16, 2018, to: James Shankel, Senior Environmental Planner California Department of Transportation 464 West 4th Street, 6th Floor, MS-827 San Bernardino, California 92410-1715 or via email to: james.shankel@dot.ca.gov

Thank you for the opportunity to respond to the Interstate 15 Corridor Project.

The American Coalition for Sustainable Communities (ACSC) is a voluntary citizen coalition in Southern California. Our mission is sustaining representative government.

The scope of our analysis, observations and comments pertain to the Report and the Air Quality Report and how these relate to United Nations sustainable development and the AB 32 scoping plan.

Report

Interstate 15 Corridor Project
Cities of Eastvale, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana
Riverside and San Bernardino Counties, California
DISTRICT 8 – RIV – 15 (PM 49.8/52.3), SBD – 15 (PM 0.0/12.2)
PN 0812000184 / EA 08-0R8000
Initial Study [with Proposed] Mitigated Negative
Declaration/Environmental Assessment

Air Quality Report

Interstate 15 (I-15) Corridor Project
PORTIONS OF SAN BERNARDINO COUNTY AND RIVERSIDE COUNTY
DISTRICT 8 (08-RIV-15 PM 49.8/52.3 AND 08-SBd-15 PM 0.0/12.2)
EA 08-0R8000
PN 0812000184
Air Quality Report

Observations

- We have observed that the reports appear to out of compliance because they use models from the United Nations International Panel on Climate Change (IPCC), as endorsed by Federal and California agencies and because of this,

The American Coalition for Sustainable Communities – FutureEarthUS@gmail.com - 1

Comment 39: Dan Titus, American Coalition for Sustainable Communities (ACSC)

ACSC

- 39-1
- Cost-Benefit Analyses are incomplete
- "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.*
- Presidential Executive Order on Promoting Energy Independence and Economic Growth: 3-28-2017*
- Section 1: Policy*
- (e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics."*

Requests

- 39-2
1. We request that the aforementioned reports, including but not limited to, all sections pertaining to the Interstate 15 Corridor Project, be reevaluated using credible GHG data models.
- 39-3
2. We request that the report authors identify and itemize for clarity, all voluntary sustainability and all mandatory sustainability elements in all sections presented for public review at: <http://gosbcta.com/plans-projects/projects-freeway-I-15Corridor.html>

The American Coalition for Sustainable Communities ~ FutureEarthUS@gmail.com ~ 2

- 39-1 Project GHG emissions are estimated and provided for informational purposes only. No additional financial cost or regulatory burden resulted from the disclosure of any GHG emissions presented in the Environmental Document.
- 39-2 Greenhouse gas (GHG) were calculated using the California Air Resources Board (CARB) developed EMFAC2014 emissions factors. CARB-developed emissions factors are the only acceptable emissions factors for use on Caltrans projects.
- 39-3 For detailed discussion of sustainability elements, see the project's Air Quality Report (Climate Change Chapter), which was prepared according to Caltrans guidance and requirements and included as part of the administrative record for this project. The following project-specific sustainability elements are provided: (GHG-1) The project will incorporate ITS elements to help manage the efficiency of the highway system. For example, the project will install vehicle detection stations to facilitate dynamic pricing on the Express Lanes to manage traffic so it will not exceed threshold LOS levels. Changeable message signs will improve traveler information so motorists can avoid delays. (GHG-2) The project will incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs—or balls, in the stoplight vernacular. The LED balls themselves consume less electricity than traditional lights, which will also help reduce the project's CO2 emissions. (GHG-3) Construction will be staged to minimize associated delays and congestion. When short-term full freeway closure is

Comment 39: Dan Titus, American Coalition for Sustainable Communities (ACSC)	
	<p>necessary, it will be scheduled for nighttime to minimize impacts on motorists. Interchange work will be staggered to avoid closing two consecutive interchanges or two consecutive on- or off-ramps at the same time. (GHG-4) Revegetate disturbed land. (GHG-5) Utilize grid-based electricity and/or onsite renewable electricity generation where available rather than diesel and/or gasoline powered generators. (GHG-6) Maintain all construction equipment in proper working order, according to manufacturer's specifications. The equipment must be checked by an ASE-certified mechanic and determined to be running in proper condition before it is operated.</p>

Comment 40: Elaine Gallegos



THE I-15 CORRIDOR PROJECT

Public Hearing, Etiwanda Intermediate School,
Rancho Cucamonga, California, March 1, 2018



Comments may be turned in at the public hearing
or sent via postal mail or email to:

James Shankel, Senior Environmental Planner
California Department of Transportation
464 West 4th Street, 6th Floor, MS-827
San Bernardino, California 92401-1400
or via email to: james.shankel@dot.ca.gov

Please use "Interstate 15 Corridor Project" in the
subject line of the email.

CONTACT INFORMATION

Name: Elaine Gallegos
Street Address: 12958 Miller Ave
City: Etiwanda State: CA Zip Code: 91739
Phone: (909) 322-7188 Cell: ()
Email: laniegalle@hotmai.com

YOUR COMMENTS/QUESTIONS Thank you for this opportunity; I am
grateful.
Thank you,
Elaine Gallegos

Thank you for attending the public hearing for this project and submitting this comment card.

Comment 40: Elaine Gallegos

Dear Mr. Shankel,

I have lived at 12958 Miller Ave, Etiwanda for 20 years. I moved to my house because it is all I could afford as a 35 year old single mom. I wanted to provide my children with a house of their own. The freeway noise has never been a problem. The only issue I've ever had was when the tree roots encroached upon my property and into my septic field and tank. That was taken care of. The weeds and trash which blow up against the fence is a problem; I call, and it's cleaned with the exception of last year when I did have to call the fire marshal. Cal Trans started a fire which burned 30 feet away from my house. The fire was started by a weed whacker hitting a rock. I lost time at work, and my house smelled like smoke for a month which I was never compensated or accommodated. I didn't complain.

40-1

Five years ago the freeway above our houses was retrofitted. Since then, life has been a nightmare, and I can't just list my house and sell; there is nowhere for me to go. I have been in contact for over 3 years with Tony Lucca to hear him say each time we speak, "Wait 6 months, I should hear something then". If he's working hard to resolve the issue, my apologies. The expansion joint or gap is the problem which he explained may be due to "a concrete problem". Every time a truck rolls over the crevice, it bounces and when it lands, it creates a sound similar to a truck crashing into a wall. The sound vibrates against the new houses across the street and shakes my entire house. My doors rattle all night, I have cracked windows, 2 of which I've finally replaced. I cannot put up pictures, because the trucks bouncing over the expansion joint shake them off the walls and they break. Sleeping is impossible. Having to wear earplugs and take sleeping pills just to get a good night sleep is unbearable. I can't have company or have my grandkids spend the night, the crashing noise makes us all jump, and they're afraid. Since I've lived here 6 cars have rolled over the embankment.

Needless to say, a sound engineer came 2 years ago with equipment, but nothing was done, and I never heard from anyone. I called Tony again, and he agreed to come visit. He brought an engineer and I thought it would be a great opportunity for him to finally hear what I'm dealing with. His comment was "that's what happens when you move next to the freeway". No, this is not what happens. I've never had a problem in 20 years, only after the retrofit was done incorrectly. The trucks are bouncing. The trees have been cut down due to the damage they did to my septic tank; I have no protection from cars rolling into my yard, trucks bouncing all over the freeway and shaking my house where half my doors don't close anymore or sound protection because he removed the berm from the side of the freeway. I have been left completely unprotected, and his comment was that he didn't feel any vibration. I told him to spend the night, which he did not do.

I know the express lanes are necessary, but the added stress to my house, the foundation, windows, my family's mental health will only intensify should a sound wall not be constructed. I don't know for sure if that will solve the ongoing problem with the faulty expansion joint and the noise of the bouncing of trucks, but I'm hopeful it will reduce some of the noise and shaking of my house. The past 5 years have been a nightmare for us on Miller Ave and Etiwanda Ave. Tony could have had a little compassion and understanding to issues Cal Trans brought around, but did not resolve. What he told me was insensitive, and I was embarrassed. Who wants to live next to a freeway, he didn't have to go there. It was all I

40-1 Thank you for your comment. A Noise Study Report (NSR), and a Noise Abatement Determination Report (NADR) were prepared for the project to analyze the project's noise impacts, and to determine the feasible and reasonable noise abatement that can be implemented with the project. The results of the analysis are included in Section 2.2.7 of the Environmental Document. According to the analysis, Noise measurement ST-26 was conducted at your residence and modeling location Modeled-110/Short-Term-26 (M-110/ST-26) was modeled to determine if the subject property was impacted. The measured noise level of 62.5 dBA Leq is included in Table 2-79 and the design year noise level of 65 dBA Leq was modeled and is shown in Table 2-81. Barrier S-344 was modeled to determine if the residence received benefit. Table 2-81 shows that with the inclusion of a 14-foot barrier, the predicted noise reduction at your residence would be 4 dB. Section 2.2.7.4 discusses the feasibility and reasonableness of Barrier S-344. After the benefited public protocol survey in April 2018, four noise barriers were planned for construction as part of the project including S-344.

To ensure that noise effects associated with construction and operation of the proposed project are addressed, the content in Section 2.2.7.3 of the FED has been updated to reflect the results of the sound surveys and Minimization Measure NOI-1 has been revised to provide that soundwalls S-310, S-344 S-353, and S-396, will be constructed before commencement of heavy civil and structural work on

Comment 40: Elaine Gallegos40-1
cont.

Could afford. Again, my apologies for being upset, but I haven't heard from Tony since then. I hope he is well.

Thank you for your consideration, and I'm reaching out for a little assistance. And if you feel it necessary to come out and see for yourself, please don't hesitate. You are most welcome to come and observe the living conditions we must tolerate as a result of the banging, crashing noises from the expansion joint which seems to be widening and noise worsening every day. Please come by and listen, otherwise you really won't understand what we're going thru 24/7. One never gets a full night of sleep because at 2am or every ten minutes a big rig hits the gap and we jump out of bed to make sure a truck hasn't crashed into the house. Not a good thing, Mr. Shankel, and no one will buy a house with the truck bouncing, crashing noise issue. I've already tried.

Thank you, and take care.

Sincerely,



Elaine Gallegos

12958 Miller Ave Etowanda 91739

(909) 322-7188

the freeway in the areas where the sound walls will be constructed. Any work which would occur prior construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.

CIDH piles would be used in place of vibration intensive impact pile driving in bridge construction within the project limits starting at Foothill Boulevard and extending to the northern limit of the project with the exception of Victoria Street Undercrossing, and the Cherry Avenue Undercrossing due to unsuitable soil conditions. Vibration levels identified in the FTA Noise and Vibration manual identify that (caisson) drills, which are similar to auger drills, would produce 0.089 Peak Particle Velocity (PPV) at a distance of 25 feet, which would be below the level of damage for buildings which are considered extremely susceptible to vibration damage (0.12 PPV). As any land uses susceptible to vibration impacts would be more than 25 feet from construction equipment, vibration would not result in an impact. (FTA 2018)

In general, literature on the subject shows that only blasting, pile driving, and pavement breaking have documented examples of potential damage to buildings (American Association of State Highway and Transportation Officials [AASHTO] 1990). For pile driving and pavement breaking, the potential for damage from vibration is at locations in relatively

Comment 40: Elaine Gallegos

close proximity to the activity. The closest structure (located approximately 350 feet) would be located at the Cherry Avenue undercrossing. Vibration Peak Particle Velocity (PPV) would reduce at a rate of $PPV_{ref} \times (25/D)^N \times (E_{equip}/E_{ref})^{0.5}$, where:

PPV_{ref} = 0.65 inches/sec at a reference distance of 25 feet,

D = distance from the pile driver,

N = 1.1 is the value related to attenuation of vibration throughout the ground,

E_{ref} = 36,000 foot-lb (rated energy of reference pile driver),

E_{equip} = rated energy of impact pile driver in ft-lbs (assumed same as reference). Vibration levels would be on the order of 0.03 PPV. (Caltrans 2013)

As such vibration from construction would be well below the 0.12 PPV damage potential for extremely vibration susceptible buildings referenced in the FTA noise and vibration manual.

Therefore, no vibration study was necessary and the CEQA vibration section will be updated to reflect this information.

If changes occur during the Design Build phase requiring the use of pile driving instead of CIDH vibration in the areas as described above, additional environmental review would be required to confirm that vibration impacts would not occur.

Comment 40: Elaine Gallegos	
	<ul style="list-style-type: none">• FTA. 20062018. Transit Noise and Vibration Impact Assessment. Final. FTA-VA-90-1003-06. Washington, DC. Prepared for Federal Transit Administration Washington DC.• Caltrans. 2013. Transportation and Construction Vibration Guidance Manual. Final. CT-HWANP-RT-13-069.25.3. Sacramento CA. Prepared for California Department of Transportation Sacramento CA. The project would not include an increase in heavy truck percentage therefore operational vibration would not change.

Comment 41: Riverside County Transportation Commission



4080 Lemon Street, 3rd Floor • Riverside, CA
 Mailing Address: P.O. Box 12008 • Riverside, CA 92502-2208
 951.767.7141 • 951.787.7920 • www.rctc.org

March 20, 2018

California Department of Transportation
 464 West 4th Street, 6th Floor, MS-827
 San Bernardino, CA 92410-1715
 Attention: James Shankel, Senior Environmental Planner
james.shankel@dot.ca.gov

Subject: Review of the I-15 Corridor Project Initial Study with
 Proposed Mitigated Negative Declaration / Environmental Assessment
 (Draft Environmental Document [DED])

Dear Mr. Shankel:

The Riverside County Transportation Commission ("RCTC") has reviewed the Corridor Project Initial Study with
 Proposed Mitigated Negative Declaration / Environmental Assessment for the I-15 and is providing the
 following comments:

- 41-1 1) Figure 1-6. RCTC desires to continue to coordinate with Caltrans and SBCTA to provide design information
 from the RCTC I-15 Express Lanes Project. Please ensure that the roadway improvements as part of RCTC's I-15
 Express Lanes Project currently under construction are accurately reflected as the baseline/existing condition.
- 41-2 2) Figure 1-2 and pg. 1-76. Please continue to coordinate with the RCTC's toll operations team and I-15 Express
 Lanes Project team regarding:
 - Toll pricing and toll message overhead sign locations and future dynamic messages that influence
 RCTC's I-15 Express Lanes;
 - All overhead sign locations within Riverside County including advanced signage
- 41-3 3) Pgs. 1-82-85. RCTC desires to continue to coordinate with Caltrans and SBCTA to minimize impacts during
 the future construction phase within the I-15 corridor. Minimizing impacts to all I-15 corridor travelers, RCTC
 express lane users (particularly during peak travel periods), RCTC freeway service patrol, RCTC-paid California
 Highway Patrol express lane enforcement, and RCTC express lane operations will be essential for project
 success from RCTC's standpoint. Full I-15 freeway, interchange ramp, or other closures or lane reductions that
 may impact the access to/from or the operation of RCTC's I-15 Express Lanes will need to be mitigated during
 future construction staging planning and implementation.

41-1 SBCTA and Caltrans will continue coordination efforts with RCTC regarding design and construction of SBCTA's I-15 CP with respect to RCTC's I-15 Express Lanes Project. Figure 1-6 in the Environmental Document has been revised to show RCTC's I-15 Express Lane Project as part of the base line condition in conjunction with the construction of SBCTA's I-15 CP. Below is Figure 4-2 showing the Combined Ingress/Egress access opening at the I-15 CP and the RCTC Express Lanes project build out conditions.

41-2 The project's conceptual toll pricing, overhead sign and advanced signage locations will continue to be developed in coordination with the RCTC I-15 Express Lanes Project. For a smooth transition of I-15 corridor travelers between these two projects, SBCTA will continue to coordinate with RCTC during the final design and construction of RCTC's I-15 Express Lanes Project as well as during the final design and construction of SBCTA's I-15 CP.

41-3 Per the Transportation Management Plan prepared for the project, construction staging concept plans and strategies will be implemented during project construction to help minimize delays and congestion associated with construction activities. In conjunction with the development of final construction staging plans and lane closure requirements during the final design component of the Design-Build phase of the project, SBCTA will coordinate with RCTC to make sure there are minimal impacts to RCTC Express Lane operations and to I-15 corridor travelers.

Comment 41: Riverside County Transportation Commission

California Department of Transportation
James Shankel, Senior Environmental Planner
March 20, 2018
Page 2

41-4 4) Pg. 1-76. RCTC desires to continue to coordinate with SBCTA to reach future agreement(s) as envisioned under CA SBH s.149.11 to result in an SBCTA I-15 express lane facility that overlaps and is compatible with RCTC's I-15 Express Lanes. Focusing on the future express lanes customers in both counties to maximize the benefits of the express lanes and minimize confusion due to signing, toll policies, business rules, and technology will be essential for success for both RCTC and SBCTA toll operations.

41-5 5) Pg. 1-4, 2-111 (and typical throughout). Please reflect that RCTC's I-15 Express Lanes Project is currently under construction.

Thank you for the opportunity to review and comment.

If you have any questions, please contact me at (951) 778-1098.

Sincerely,



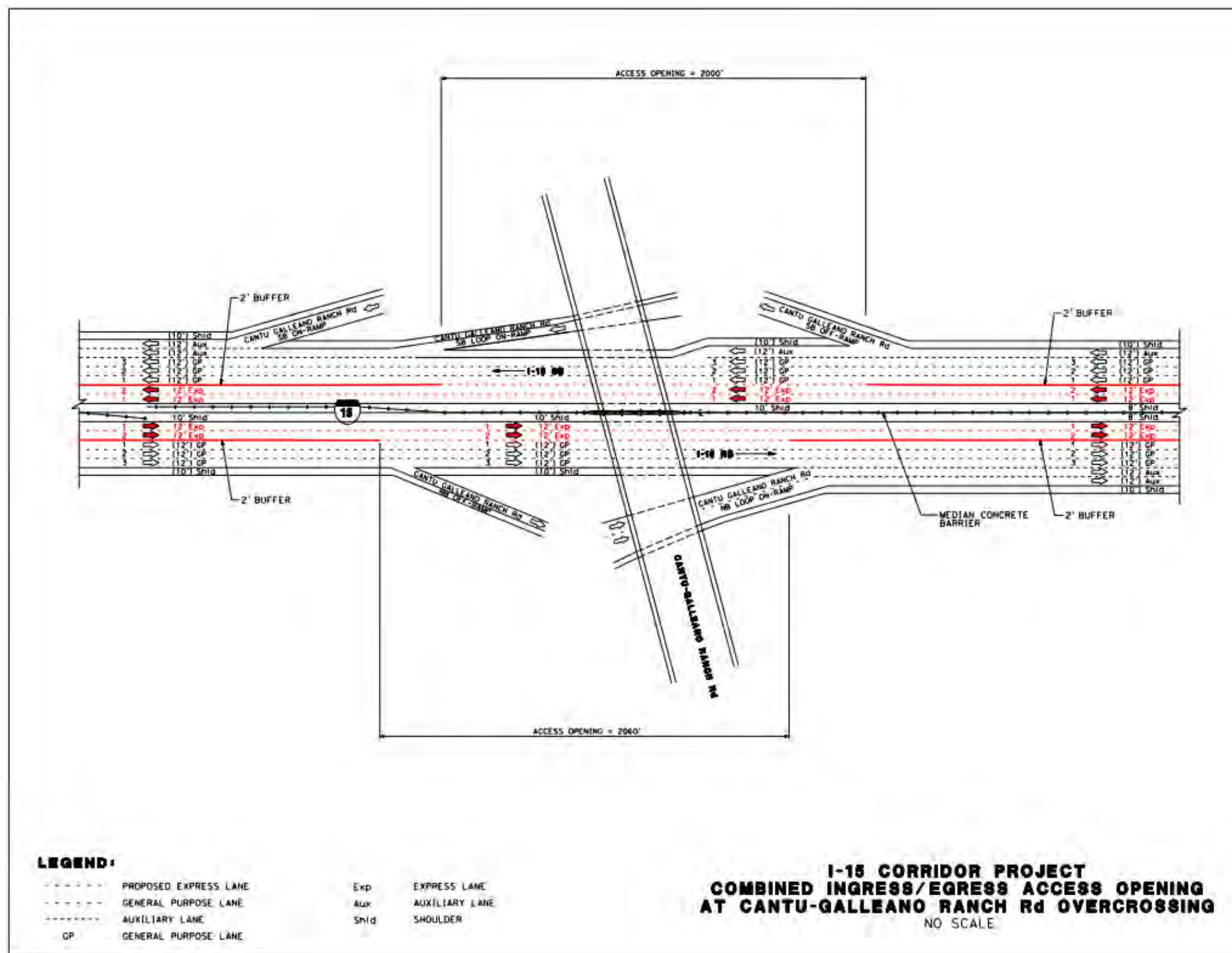
Michael Blomquist
Toll Program Director
Riverside County Transportation Commission

c: Paula Beauchamp, San Bernardino County Transportation Authority
Dennis Saylor, San Bernardino County Transportation Authority

41-4 SBCTA will continue to coordinate with RCTC in regard to toll policies, business rules, and tolling technology to help ensure the success of both the RCTC and SBCTA Express Lane facilities.

41-5 Revisions were made throughout the Environmental Document to reflect that the RCTC I-15 Express Lanes Project is now under construction.


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4-203
December 2018

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4.4 Correspondence

NRCS Forms

U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service		NRCS-CPA-106 (Rev. 1-91)	
FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS			
PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 10/25/17	4. Sheet 1 of 1
1. Name of Project Interstate 15 Corridor Project		5. Federal Agency Involved California Department of Transportation	
2. Type of Project Corridor-Toll Lane		6. County and State Riverside, CA	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 12/6/17	2. Person Completing Form Tomas Aguilar-Campos
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size 145,961 117	
5. Major Crop(s) Table Grapes, Lemons, Basil Peppers	6. Farmable Land in Government Jurisdiction Acres: 227,246 % 4.8%	7. Amount of Farmland As Defined in FPPA Acres: 713,559 % 151	
8. Name of Land Evaluation System Used Storie	9. Name of Local Site Assessment System N/A	10. Date Land Evaluation Returned by NRCS 12/13/17	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment	
		Corridor A	Corridor B
A. Total Acres To Be Converted Directly		0	0
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0
C. Total Acres In Corridor		0	0
PART IV (To be completed by NRCS) Land Evaluation Information			
A. Total Acres Prime And Unique Farmland		239.7	
B. Total Acres Statewide And Local Important Farmland		0	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		.04	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		21	
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)		57	
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points	
1. Area in Nonurban Use	15	0	
2. Perimeter in Nonurban Use	10	0	
3. Percent Of Corridor Being Farmed	20	5	
4. Protection Provided By State And Local Government	20	5	
5. Size of Present Farm Unit Compared To Average	10	0	
6. Creation Of Nonfarmable Farmland	25	0	
7. Availability Of Farm Support Services	5	0	
8. On-Farm Investments	20	0	
9. Effects Of Conversion On Farm Support Services	25	0	
10. Compatibility With Existing Agricultural Use	10	0	
TOTAL CORRIDOR ASSESSMENT POINTS		160	10
PART VII (To be completed by Federal Agency)			
Relative Value Of Farmland (From Part V)		100	0
Total Corridor Assessment (From Part VI above or a local site assessment)		160	10
TOTAL POINTS (Total of above 2 lines)		260	10
1. Corridor Selected: A	2. Total Acres of Farmlands to be Converted by Project: 0	3. Date Of Selection: 3/16/15	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
5. Reason For Selection: Only Build Alternative studied for this project			
Signature of Person Completing this Part: 		DATE 10-26-2017	
NOTE: Complete a form for each segment with more than one Alternate Corridor			

NRCS-CPA-106 (Reverse)

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points
- (2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points
- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points
- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points
- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County?
(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points
- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points
- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points
- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points
- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points
- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 10/25/17	4. Sheet 1 of 1		
1. Name of Project Interstate 15 Corridor Project		5. Federal Agency Involved California Department of Transportation			
2. Type of Project Corridor-Toll Lane		6. County and State San Bernardino, CA			
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 12/6/17	2. Person Completing Form Thomas Aguilar - Campos		
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		4. Acres Irrigated Average Farm Size 21,788 62			
5. Major Crop(s) Alfalfa, Citrus, Oriental Vegetables		7. Amount of Farmland As Defined in FPPA Acres: 686,983 %53			
6. Farmable Land In Government Jurisdiction Acres: 29,427 %0.2%		10. Date Land Evaluation Returned by NRCS 12/18/17			
8. Name Of Land Evaluation System Used Storie		9. Name of Local Site Assessment System N/A			
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		0			
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0			
C. Total Acres In Corridor		0			
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		350.8			
B. Total Acres Statewide And Local Important Farmland		0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.05			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		33			
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)		61			
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area In Nonurban Use		15	0		
2. Perimeter In Nonurban Use		10	0		
3. Percent Of Corridor Being Farmed		20	5		
4. Protection Provided By State And Local Government		20	5		
5. Size of Present Farm Unit Compared To Average		10	0		
6. Creation Of Nonfarmable Farmland		25	0		
7. Availability Of Farm Support Services		5	0		
8. On-Farm Investments		20	0		
9. Effects Of Conversion On Farm Support Services		25	0		
10. Compatibility With Existing Agricultural Use		10	0		
TOTAL CORRIDOR ASSESSMENT POINTS		160	10	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)		160	10	0	0
TOTAL POINTS (Total of above 2 lines)		260	10	0	0
1. Corridor Selected: A	2. Total Acres of Farmlands to be Converted by Project: 0	3. Date Of Selection: 3/16/15	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		

5. Reason For Selection:

Only Build Alternative studied for this project

Signature of Person Completing this Part: 

10-26-2017
DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

NRCS-CPA-106 (Reverse)

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
 More than 90 percent - 15 points
 90 to 20 percent - 14 to 1 point(s)
 Less than 20 percent - 0 points
- (2) How much of the perimeter of the site borders on land in nonurban use?
 More than 90 percent - 10 points
 90 to 20 percent - 9 to 1 point(s)
 Less than 20 percent - 0 points
- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
 More than 90 percent - 20 points
 90 to 20 percent - 19 to 1 point(s)
 Less than 20 percent - 0 points
- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
 Site is protected - 20 points
 Site is not protected - 0 points
- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County?
 (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
 As large or larger - 10 points
 Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points
- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
 Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
 Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
 Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points
- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
 All required services are available - 5 points
 Some required services are available - 4 to 1 point(s)
 No required services are available - 0 points
- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
 High amount of on-farm investment - 20 points
 Moderate amount of on-farm investment - 19 to 1 point(s)
 No on-farm investment - 0 points
- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
 Substantial reduction in demand for support services if the site is converted - 25 points
 Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
 No significant reduction in demand for support services if the site is converted - 0 points
- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
 Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
 Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
 Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

TCWG

9/15/2016

Southern California Association of Governments - Project Level Conformity

May 2016

PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

May, 2016	Determination
LA0G1020 May 2016	Not a POAQC - Hot Spot Analysis Not Required (FHWA concurrence was received via email after meeting)
20159901 May 2016	Not a POAQC - Hot Spot Analysis Not Required (EPA, Caltrans, and FHWA concurrence was received via email after July 26, 2016 meeting)
0120002 May 2016	Not a POAQC - Hot Spot Analysis Not Required (FHWA concurrence was received via email after meeting)
LA0D29 May 2016	Not a POAQC - Hot Spot Analysis Not Required (FHWA concurrence was received via email after meeting)
REG0701 May 2016	Not a POAQC - Hot Spot Analysis Not Required (FHWA concurrence was received via email after meeting)

STAY CONNECTED



TRANSLATE THIS PAGE

Select Language ▼

Lists of PM hot spot interagency review forms, qualitative analyses and quantitative analyses

SEARCH BY:

PM Hot Spot Forms

- [August, 2016](#)
- [July, 2016](#)
- [June, 2016](#)
- [May, 2016](#)
- [March, 2016](#)
- [February, 2016](#)
- [November, 2015](#)
- [October, 2015](#)
- [September, 2015](#)

Qualitative Analysis

- [August, 2016](#)
- [July, 2015](#)
- [October, 2014](#)
- [March, 2014](#)
- [January, 2014](#)
- [December, 2013](#)
- [February, 2013](#)
- [November, 2012](#)
- [September, 2012](#)

Quantitative Analysis

- [August, 2016](#)
- [March, 2016](#)
- [September, 2015](#)
- [July, 2015](#)
- [May, 2015](#)
- [October, 2014](#)
- [August, 2014](#)
- [July, 2014](#)
- [June, 2014](#)

<http://www.scag.ca.gov/programs/Pages/ProjectLevel.aspx>

Biological Resources

USFWS-Critical Habitats

STATE OF CALIFORNIA—CALIFORNIA TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENVIRONMENTAL PLANNING

464 WEST FOURTH STREET, MS 828

SAN BERNARDINO, CA 92401-1400

MAIN (909) 383-4561

DIRECT (909) 388-1252

FAX (909) 383-6494

www.dot.ca.gov/dist8



Serious drought!
Help save water!

April 7, 2017

Ken Corey, Assistant Field Supervisor
Palm Springs Fish & Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Subject: I-15 Corridor Improvement Project San Bernardino Kangaroo Rat Memorandum

Dear Mr. Corey:

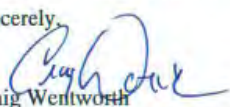
San Bernardino County Transportation Authority, in cooperation with the California Department of Transportation, proposes to increase mainline capacity and enhance operations and mobility on Interstate 15 from south of State Route 60 to north of State Route 210 (SR-210). The proposed I-15 Corridor Project (project) extends for approximately 14 miles from Riverside County Post Miles (PM) 49.8–52.3 to San Bernardino PM 0.0–12.2.

USFWS Designated Critical Habitat for San Bernardino Kangaroo Rat (SBKR) occurs within the northern portion of the project alignment. A habitat assessment was performed and found that mature and disturbed Alluvial Fan Sage Scrub habitat is present within the Caltrans Right of Way and Heteromyid sign was observed within the Right of Way along southbound I-15; however, all sign was observed below the toe-of-slope of the existing road grade. None was observed along the northbound I-15. Suitable habitat for SBKR is separated from the proposed work limits by a slope up to the road grade that contains a high percentage of non-native grasses and weeds and that compacted imported fill soils comprise the road base and shoulders; therefore, the existing shoulders and grade do not contain the Primary Constituent Elements (PCEs) required for the species natural life history. As a result, no trapping was proposed. Work proposed in this portion of the alignment is limited to striping, utility/fiber optic trenching, and signage placement/relocation within the disturbed road shoulder above the grade of suitable habitat and separated by a barrier of dense non-native weeds and grasses.

On May 13th, 2016 a conference call with SBCTA, Caltrans, and USFWS was conducted to discuss not trapping for SBKR and use of potential avoidance and minimization measures to support a No Effect determination for SBKR. USFWS expressed concerns that work in this portion of the alignment must not encroach into suitable habitat if no trapping and use of a barrier fence was proposed. USFWS requested additional information regarding the proposed project activities in this location. Accordingly, a SBKR memorandum was developed and is enclosed as Attachment 1.

Please review the attached SBKR memo and provide any comments or concerns. If you require additional information or clarification regarding this project, please contact me at (909) 388-1252.

Sincerely,


Craig Wentworth
Senior Environmental Planner
(909) 388-1252
Biological Studies and Permits Branch
Caltrans District 8

"To provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability."

Attachments: San Bernardino Kangaroo Rat No Effect Memorandum
cc:John Taylor

MSHCP Consistency:

Quinnell, Luz A@DOT

From: John Taylor <john_m_taylor@fws.gov>
Sent: Tuesday, June 05, 2018 5:55 PM
To: Wentworth, Craig S@DOT; Quinnell, Luz A@DOT
Cc: Pert, Heather@Wildlife
Subject: I-15 Express Lanes Addition (North) 0R800 (FWS/CDFW-WRIV-14B0168-18CPA0234)

Luz and Craig,

Thank you for the opportunity to review the Interstate 15 (I-15) Express Lanes Addition Project (Project). The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department), hereinafter the Wildlife Agencies, received your Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Request via email February 20, 2018 and the Project's Natural Environmental Study (NES) appendices May 14, 2018. Following review of the Consistency Request, NES, and other Project related material, under recommendation, the Wildlife Agencies find the proposed Project consistent with the MSCHP.

Within the Section 4.3.5 of the NES under the subheading *Avoidance and Minimization*, the pre-construction burrowing owls surveys will be performed within 30 days of ground disturbing activities. The Wildlife Agencies recommend implementing the Department's 2012 Staff Report for Burrowing Owl for surveys and, as identified in subheading *Compensatory Mitigation*, for recommended best practices should burrowing owl be observed. We also request you include the Service in any burrowing owl correspondence. If you have any questions regarding this consistency determination, please contact either myself or Heather Pert of the Department.

Sincerely,

John M. Taylor
Fish & Wildlife Biologist
U.S. Fish and Wildlife Service - Palm Springs
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262
Ph: 760-322-2070 x418
john_m_taylor@fws.gov

And

Heather A. Pert, PhD
Inland Deserts Region, R6
Senior Environmental Scientist
California Department of Fish & Wildlife
3602 Inland Empire Blvd, Suite C-220
Ontario, Ca 91764
858-395-9692 (mobile and only number)
Heather.Pert@wildlife.ca.gov
www.wildlife.ca.gov

SANBAG Interstate 15 Corridor Express Lanes

Meeting Summary

Western Riverside County Regional Conservation Authority

3403 10th Street, Suite 320

Riverside, CA 92501

Thursday, January 19, 2016

10:00 AM

Attendees

Laurie Dobson Correa (RCA), Heather Pert (CDFW), Charlie Landry (RCA), Karin Cleary-Rose (USFWS), John Taylor (USFWS), Dudek, Greg Hoisington (ICF), Marisa Flores (ICF), Julie Beeman (VCS)

Purpose: Introduce the project to RCA, USFWS and CDFW. Described project location, focused surveys that have been conducted, and description of jurisdictional water resource at Mission Boulevard.

- Greg (ICF) presented the project to RCA, Dudek, USFWS, and CDFW.
- Jurisdictional feature at Mission Boulevard is tributary to Day Creek. USFWS stated that the only way to avoid a DBESP is to fully avoid the feature or demonstrate it is not riparian-riverine. MSHCP riparian-riverine typically follows CDFW jurisdiction, and this feature is CDFW jurisdictional. It may not be considered MSHCP riparian-riverine if it can be demonstrated that it is man-made. USFWS and RCA tentatively agreed this is likely the case but they need the documentation (e.g., provide as-builts and/or historical aerial imagery showing the drainage construction). Several questions regarding where the feature starts and what the hydrological input is were discussed; ICF described the feature as being constructed in uplands to drain roadway runoff with the beginning of the feature starting as concrete ditch having no natural watercourse feeding into the feature. The feature receives flows from a very limited and localized micro watershed. It is ICF's opinion that the feature does not meet the definition of an MSHCP riparian-riverine feature.
- The costs associated with the preparation of a DBESP and mitigation, may prevent costly construction avoidance later. If a DBESP is prepared, the review period would be streamlined (30-days instead of 60-days).
- Mitigation for permanent impacts to this feature would need to be a minimum 2:1. A 1:1 ratio is acceptable for temporary impacts.
- If credits are available, mitigation can use RCRC in-lieu fee program.
- Criteria cells: no issue with project being within cells.
- The second DSFLF surveys are scheduled for 2017 survey season.
- USFWS, CDFW, and VCS are interested in reviewing the report results of the repeat rare plant focused surveys in 2017.

- RCA confirmed that the project is not subject to the JPR process. Caltrans will be responsible for consulting with USFWS and CDFW for MSHCP consistency and streamline BO.
- Informed RCA and agencies that NES is currently being reviewed by Caltrans.
- USFWS and RCA stated that they prefer a separate MSHCP Consistency section as part of the NES (as an Appendix) instead of the MSHCP consistency discussion being spread out between sections of the NES; however, this is not mandatory. ICF stated that the NES has clearly identified MSHCP sections in the NES, so RCA review would not be arduous.

USFWS List of Proposed, Threatened, and Endangered Species, and Critical Habitats



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:

July 18, 2018

Consultation Code: 08ECAR00-2016-SLI-0241

Event Code: 08ECAR00-2018-E-03081

Project Name: Interstate 15 (I-15) Corridor Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

07/18/2018

Event Code: 08ECAR00-2018-E-03081

2

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

07/18/2018

Event Code: 08ECAR00-2018-E-03081

1

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

07/18/2018

Event Code: 08ECAR00-2018-E-03081

2

Project Summary

Consultation Code: 08ECAR00-2016-SLI-0241

Event Code: 08ECAR00-2018-E-03081

Project Name: Interstate 15 (I-15) Corridor Project

Project Type: TRANSPORTATION

Project Description: The proposed I-15 CP extends for approximately 14.7 miles from Riverside County (Riv) Post Miles 49.8-52.3 to San Bernardino (SBD) Post Miles 0.0-12.2. The project would add two Express Lanes in each direction between State Route 60 (SR-60) and State Route 210 (SR-210), one Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. This project also proposes to add one Auxiliary Lane in each direction between SR-60 and Interstate 10 (I-10) and one Auxiliary Lane in the northbound (NB) direction between Fourth Street and Foothill Boulevard.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.08218053434815N117.5448097035076W>



Counties: Riverside, CA | San Bernardino, CA

07/18/2018

Event Code: 08ECAR00-2018-E-03081

3

Endangered Species Act Species

There is a total of 15 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 Fisheries¹, 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
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat <i>Dipodomys stephensi</i> (incl. <i>D. cactus</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

07/18/2018

Event Code: 08EGAR00-2018-E-03081

4

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad <i>Anaxyrus californicus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3762	Endangered
Mountain Yellow-legged Frog <i>Rana muscosa</i> Population: Southern California DPS There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8037	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker <i>Catostomus santaanae</i> Population: 3 CA river basins There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly <i>Rhaphiomidas terminatus abdominalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

07/18/2018

Event Code: 08ECAR00-2018-E-03081

5

Flowering Plants

NAME	STATUS
Braunton's Milk-vetch <i>Astragalus brauntonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5674	Endangered
San Diego Ambrosia <i>Ambrosia pumila</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star <i>Eriastrum densifolium ssp. sanctorum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Slender-horned Spineflower <i>Dodecahema leptoceras</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4007	Endangered
Thread-leaved Brodiaea <i>Brodiaea filifolia</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> https://ecos.fws.gov/ecp/species/2060#crithab	Final

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Initial Study/Environmental Assessment
I-15 Corridor Project PA/ED
December 2018

Table of Contents

CHAPTER 6. DISTRIBUTION LIST6-1

Chapter 6. Distribution List

A compact disc copy of the Draft *Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment* (draft IS/EA) and/or a Notice of Availability was distributed to the federal, state, regional, local agencies and elected officials, as well as interested groups, organizations and individuals, and utilities and service providers. In addition, all property owners and resident/occupants within a quarter-mile radius of the project limits were provided the Notice of Availability for the draft IS/EA.

This *Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact* was distributed to all community members who commented on the project, and all public agencies and elected officials listed in this chapter.

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Swift Transportation Co Inc.
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Vasan
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Witness
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Appendix A. Resources Evaluated Relative to the Requirements of Section 4(f)

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Appendix A. Resources Evaluated Relative to the Requirements of Section 4(f)

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 either: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

Pursuant to Section 4(f) of the Department of Transportation Act of 1966 (Title 49 USC Section 303) and 23 CFR 774.17, Parks and recreational resources evaluated included any park, recreational trail facility, open space area, recreational bikeway, or other recreational facility located within 0.5 mile of the proposed project area. Evaluated project limits included the area associated with the advance signage required in conjunction with the operation of the express lanes. There are 11 park and recreational facilities including one trail, located within 0.5 miles or less from the proposed project that are considered Section 4(f) resources. These facilities are listed and described in **Section 2.1.2** of this document.

The following is a description of the evaluated recreational facilities and explanation of why the project does not use the resource and therefore, does not trigger Section 4(f).

Vermola Park:

Located in the City of Jurupa Valley within approximately 0.3 mile from the project limits. Park facilities include a playground, grassy areas, picnic tables, ball fields, outdoor basketball courts, restrooms, and a picnic shelter. There is no potential for direct use, or use resulting from temporary occupancy/constructive use from the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that the project would have any permanent or temporary impacts on the facility; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Garcia Park:

Located in the City of Rancho Cucamonga within approximately 0.4 mile from the project limits, the park facilities include picnic tables and shelters, a playground, a basketball court, a baseball field, an exercise course, and restrooms. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place

within existing state right of way. It is not anticipated that the project would have permanent or temporary impacts on the facility; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Victoria Arbor Park:

Located in the City of Rancho Cucamonga within approximately 0.5 mile from the project limits, the park facilities include picnic tables, barbecues, a shelter, playground, basketball court, softball field, an exercise course, and restrooms. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Rancho Cucamonga Adult Sports Park:

Located in the City of Rancho Cucamonga within approximately 0.5 mile from the project limits. Park facilities include a baseball stadium, two soccer fields, three softball fields, a Little League field, an open-air plaza, and covered pavilions. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

San Sevaine Park:

Located in the City of Fontana within approximately 0.4 mile from the project limits, the park facilities include barbecue areas, a basketball court, picnic tables, a playground, tennis courts, restrooms, and a volleyball court. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Rosena Park West:

Located in the City of Fontana within approximately 0.4 mile from the project limits. The park facilities include picnic tables, a playground, bocce/horseshoes, and restrooms. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Rosena Park East:

Located in the City of Fontana within approximately 0.5 mile from the project limits. The park facilities include bocce/horseshoe areas, picnic tables, a playground, and restrooms. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Jessie Turner Health and Fitness Center:

Located in the City of Fontana within approximately 0.5 mile from the project limits. The park facilities include basketball court, a fitness room, and restrooms. There is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Fontana Park Aquatic Center:

Located in the City of Fontana within approximately 0.5 mile from the project limits. The park facilities include picnic tables, a pool, and restrooms. There is no potential for direct use, or use

resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. In general, construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project; therefore, the project does not use the property and does not hinder the preservation of the property. The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Coyote Canyon Park:

Located in the City of Fontana immediately adjacent to the project limits. Park facilities include softball fields, barbecue areas, picnic shelters and tables, a playground, a snack bar, and restrooms. The project is located immediately next to the existing state right of way associated with the southwest quadrant of the I-15 Duncan Canyon interchange. However, there is no potential for direct use, or use resulting from temporary occupancy/constructive use of the project. The project would not require any right of way from the facility, and would not affect access to this park due to construction activities. According to measure **PARK-1** listed in the Environmental Commitments Record included in Appendix C, access to the park would be maintained at all times during the construction of the project. Construction activities associated with the staging areas (i.e., materials and equipment storage, construction vehicle movement, idling) would not conflict with the regular use of the park, as all construction work related to the project improvements is expected to take place within existing state right of way associated with the I-15 Duncan Canyon interchange. Furthermore, staging and storage of materials will not be allowed within 500 feet of the limits of Coyote Canyon Park according to the avoidance and minimization measure **PARK-2** listed in the Environmental Commitments Record included in Appendix C of this document. The park’s functions, features, and activities would not be affected during construction or operation of the project. It is not anticipated that there would be any permanent or temporary impacts on the facility due to the project.; The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

Coordination with the City of Fontana occurred regarding Caltrans’ evaluation and determination with respect to the proposed project’s potential to impact the park. Coordination efforts began with a meeting with the City of Fontana’s Deputy City Manager, Debbie Brazill, along with other City staff on Wednesday May 31, 2017. Subsequently a formal letter was transmitted to Ms. Brazill on December 4, 2017, which provided a summary of Caltrans’ evaluation and determination, which included avoidance and minimization measures developed to address the proposed project in relation to Coyote Canyon Park. The City of Fontana provided written concurrence on December 11, 2017. A copy of the correspondence letters in this regard are included at the end of this Appendix.

Pacific Electric Trail:

The existing I-15 highway crosses the Pacific Electric Trail on the Etiwanda Overhead, which consists of two bridge structures (one northbound and one southbound structure). The portion east of the existing highway centerline is within the jurisdiction of the City of Fontana, the

portion west of the existing highway centerline is within the jurisdiction of the City of Rancho Cucamonga. The Pacific Electric Trail is owned by SBCTA and the section within the City of Fontana jurisdiction was leased to the City for the purpose of use as a bike trail. The lease term is for 15 years ending in 2020. Similarly, the section of the trail located within the City of Rancho Cucamonga jurisdiction was leased to the City for the purpose of use as a bike trail. The City of Rancho Cucamonga lease was amended in 2010 for a 20-year initial term.

The proposed project would require construction of a third bridge structure that would tie into the existing two separate bridge structures, which would result in closing the gap between the northbound and southbound lanes of the freeway lanes at this location. This improvement would provide a widened highway facility to accommodate the proposed Express Lanes. Based on current design, all support columns will be constructed outside the extent of the trail pavement and right-of-way limits. As a result, no portion of the Pacific Electric Trail would be incorporated into the project improvements.

Falsework would be needed for the construction of the structures and would be constructed around the Pacific Trail limits. Construction of falsework would not require ground disturbance or any other impacts to the trail pavement, facilities, or property. The trail will remain open throughout construction of the Etiwanda Overhead except during installation and removal of falsework. A full closure of the Pacific Electric Trail will be necessary for approximately two to three weeks during the actual installation of falsework below the Etiwanda Overhead. The trail will again be closed for approximately two to three weeks during the removal of the falsework. The construction of the falsework would be restricted to the hours of 9:00 PM to 5:00 AM. Upon completion of the Etiwanda Overhead improvements and the removal of the falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.

Since construction activities associated with falsework at the Etiwanda Overhead are anticipated to result in the temporary closure of the Pacific Electric Trail, a “temporary occupancy” as defined in 23 CFR 774.13(d) could occur. Pursuant to 23 CFR 774.13(d), the following criteria need to be satisfied:

1. Duration 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;

The duration for the proposed closure of the Pacific Electric Trail would be the length of time needed to erect the falsework below the Etiwanda Overhead, and the removal of the falsework after the completion of the structure’s construction. It is anticipated that approximately three weeks will be needed for the construction of the falsework, and an additional two to three weeks for dismantling and removing the falsework. The trail would remain open during the entire length of the project construction, except for full nighttime closure during the falsework construction activities.

2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;

The scope of work involves erecting and dismantling of falsework and movement of construction equipment and personnel within the property limits of the Pacific Electric Trail. No ground disturbance or other impacts to the Pacific Electric Trail pavement, facilities, or

related property is planned as part of this work. Columns supporting the proposed Etiwanda Overhead structure would be constructed outside the paved area of the Pacific Electric Trail consistent with the existing columns supporting the northbound and southbound structures.

3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;

No permanent physical disturbance of the Pacific Electric Trail pavement, facilities, or related property is anticipated. The falsework would consist of temporary structures required to construct the overhead and would be constructed outside the pavement and limits of the trail. Disruption to the protected activities (i.e. travel along the trail) would be minimized by restricting all falsework construction and associated trail closure to nighttime hours between the hours of 9:00 PM and 5:00 AM advance notice of trail closure will be provided by SBCTA to the local jurisdictions a minimum of 90 days in advance so coordination can occur regarding the appropriate alternate reroute/detour information, applicable signs, and other public outreach efforts.

4. The land being used must be fully restored, i.e., the property must be returned to a condition, which is at least as good as that which existed prior to the project; and

Upon completion of the Etiwanda Overhead improvements, the falsework would be removed and the existing trail facilities would remain unaffected. Any incidental or unanticipated damage or disrepair that may result from proposed construction activities would be restored to preconstruction conditions for the full extent of the Pacific Electric Trail paved area.

5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

Impacts on the Pacific Electric Trail during the construction of the proposed project were evaluated and determined to meet the requirements for the temporary occupancy exception to Section 4(f).

Coordination with the City of Fontana occurred regarding Caltrans' evaluation and determination with respect to the proposed project's potential to impact the Pacific Electric Trail in the same time frame as coordination efforts related to Coyote Canyon Park. The December 4, 2017 letter to the City of Fontana also addressed the Pacific Electric Trail and the City of Fontana's December 11, 2017 concurrence also addressed the Pacific Electric Trail.

Coordination with the City of Rancho Cucamonga regarding Caltrans' evaluation and determination with respect to the proposed project's potential to impact the Pacific Electric Trail began with a meeting with the City of Rancho Cucamonga's Senior Planner, Mike Smith, along with other City staff on Thursday July 6, 2017. Subsequently a formal letter was transmitted to Mr. Smith on December 4, 2017, which provided a summary of Caltrans' evaluation and determination, and included avoidance and minimization measures developed to address the proposed project in relation to the Pacific Electric Trail. The City of Rancho Cucamonga requested a revision to the measures pertaining to notification during construction on January 22, 2018. A revised formal letter was transmitted to Mr. Smith on January 22, 2018. The City of Rancho Cucamonga provided written concurrence on January 23, 2018. A copy of the January 22, 2018 correspondence in this regard is included at the end of this Appendix.

Specified measures will be implemented during construction to ensure safe and continued use of the Pacific Electric Trail to the maximum extent possible. These include measures **TRAIL-1** through **TRAIL-4** listed in the Environmental Commitments Record included in Appendix C of this document. According to Measure **TRAIL-5**, any unanticipated damage to the Electric Pacific Trail due to construction activities would be restored to the preconstruction conditions. Upon completion of construction, the Pacific Electric Trail would continue to function in the same way that it currently functions with no notable change in trail operation resulting from improvements to the Etiwanda Overhead. As stated in the respected letters to the cities of Fontana and Rancho Cucamonga, while the new structure between the northbound and the southbound freeways will cover the trail, the freeway bridge is of sufficient height and the overall width of the combined structures is sufficiently limited so that the trail will still experience substantial natural light during daytime, and the performance of existing night lighting that is already installed along the trail at approximately 150-foot intervals will not be impacted.

The trail's functions, features, and activities would not be affected during construction or operation of the project. It is not anticipated that there would be any permanent or temporary use of the Pacific Electric Trail as a result of the proposed project. The property is a Section 4(f) property, but no "use" will occur. Therefore, the provisions of Section 4(f) do not apply.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

ENVIRONMENTAL IMPACT STATEMENT

DEPARTMENT OF TRANSPORTATION

DISTRICT 8

DIVISION OF ENVIRONMENTAL PLANNING

ENVIRONMENTAL STUDIES "C"

464 WEST FOURTH STREET, MS 827

SAN BERNARDINO, CA. 92401-1400

PHONE (909) 383-6379

FAX (909) 383-6494

TTY 711

www.dot.ca.gov



Make Conservation
a California Way of Life.

December 4, 2017

Ms. Debbie Brazill
Deputy City Manager
City of Fontana Development Services
8353 Sierra Avenue
Fontana, CA 92335

Dear Ms. Brazill:

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to construct Express Lanes on I-15 from approximately 0.3 mile south of Cantu-Galleano Ranch Road in the Cities of Eastvale and Jurupa Valley at post mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at post mile 12.2 in the City of Fontana in San Bernardino County, with the proposed I-15 Corridor Project. The project would add two (2) Express Lanes in each direction between SR-60 and SR-210, one (1) Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 and one (1) Express Lane in each direction between SR-210 and Duncan Canyon Road. This project also proposes to add one (1) Auxiliary Lane in each direction between SR-60 and I-10 and one (1) Auxiliary Lane in the northbound direction between Fourth Street and Foothill Boulevard. The project construction limits at the southerly end extend approximately 1.3 miles south of the Cantu-Galleano Ranch Road Overcrossing and at the northerly end extend approximately 1.6 miles north of Duncan Canyon Road Overcrossing, to allow for the placement of advanced signage for express lanes.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA), and Caltrans is also the lead agency under the National Environmental Policy Act (NEPA). Regarding NEPA, the Federal Highway Administration (FHWA) assigned, and Caltrans assumed effective July 1, 2007 under the NEPA Pilot Program, all of the Secretary of the United States Department of Transportation responsibilities under NEPA for environmental coordination and consultation under federal environmental laws pertaining to the review or approval of projects, and since October 1, 2012 Caltrans has continued to assume these responsibilities under NEPA Assignment. This assignment includes projects on the State Highway System. 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.

Pursuant to Section 4(f) of the Department of Transportation Act of 1966 (Title 49 USC Section 303) and 23 CFR 774.17, Coyote Canyon Park and the Pacific Electric Trail are recognized as Section 4(f) resources. Preliminary engineering efforts to-date for the proposed project have been reviewed by Caltrans, to determine if and/or to what extent, the proposed I-15 Corridor Project might impact Coyote Canyon Park and/or the Pacific Electric Trail.

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Ms. Debbie Brazill
December 4, 2017
Page 2

Coyote Canyon Park is owned and operated by the City of Fontana. As shown in the attached "I-15 Corridor Project Coyote Canyon Park" figure, the park is located immediately adjacent to the southwest quadrant of the I-15/Duncan Canyon interchange. Completion of the proposed I-15 Corridor Project will not include any improvements to any part of the existing I-15/Duncan Canyon interchange with the exception of striping modifications to the I-15 median and adjacent traffic lane. SBCTA's proposed I-15 Corridor project will not result in any part of Coyote Canyon Park needing to be acquired (permanently or temporarily), and will not otherwise result in a use of Coyote Canyon Park, during or following, construction of the I-15 Corridor project. Additionally, during construction, staging and storage of materials will not be allowed within 500 feet of the limits of Coyote Canyon Park, and there will be no impacts to park access at any time throughout construction.

In conjunction with completion of the *Noise Study Report* prepared for the I-15 Corridor Project, it was determined that some parts of Coyote Canyon Park are expected to experience up to a three decibel (dB) increase in noise related to traffic, by the design horizon year of 2045 for the proposed project; however, a three dB change in noise levels is considered to be barely perceptible. In consideration that the fields for baseball or softball are Coyote Canyon Park's predominant feature, the activities, features, and attributes of Coyote Canyon Park are not expected to be substantially diminished.

To avoid or minimize potential impacts to Coyote Canyon Park during construction, the following will be incorporated into the construction contract:

- The construction contract shall stipulate that no construction related equipment, materials, or personnel be allowed within the Coyote Canyon Park property throughout the period of construction. Existing means of access to the Coyote Canyon Park (via Duncan Canyon Road and Coyote Canyon Road) shall be maintained at all times during construction.
- Staging and storage of materials shall not occur within 500 feet of the limits of Coyote Canyon Park.

Additionally, with respect to potential temporary noise and air quality impacts during construction, the noise and air quality measures included in the Environmental Document prepared for the I-15 Corridor Project will be specifically stipulated as being applicable while construction activities are occurring within 500 feet of the limits of Coyote Canyon Park.

The Pacific Electric Trail is a regional recreational facility that crosses into the city of Fontana within the project limits. As shown in the attached "I-15 Corridor Project Pacific Electric Trail" figure, the Pacific Electric Trail crosses underneath the existing I-15, which consists of two bridge structures (one for northbound traffic and one for southbound traffic), identified overall as the Etiwanda Overhead (OH). The portion of the Pacific Electric Trail east of the existing highway centerline is within the jurisdiction of the City of Fontana. The proposed project would require construction of a third structure that would tie into the two existing separate bridge structures, covering the gap between the northbound and southbound freeway lanes at this location. Based on preliminary engineering efforts to-date, all support columns would be constructed outside the limits of the Pacific Electric Trail. Additionally, all other improvements in this area would be located entirely within the existing limits of the I-15 right of way.

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Ms. Debbie Brazill
December 4, 2017
Page 3

During construction, falsework would be installed around the Pacific Electric Trail. The trail would be able to remain open throughout construction of the Etiwanda Overhead with the exception of when the falsework is installed and removed. A full closure of the Pacific Electric Trail would be necessary for no more than two to three weeks from 9 p.m. to 5 a.m. during the installation of falsework below the Etiwanda Overhead. The trail would again be closed for no more than two to three weeks from 9 p.m. to 5 a.m. during the removal of the falsework. The City of Fontana would receive closure information a minimum of 90 days in advance so that the City would be able to provide 30 days advance notice to residents. Upon completion of the Etiwanda Overhead improvements and the removal of falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.

To avoid or minimize potential impacts to the Pacific Electric Trail during construction, the following will be incorporated into the construction contract:

- In the area of the Etiwanda Overhead, the construction contractor shall install all falsework during defined nighttime hours. The falsework required to construct the Etiwanda Overhead shall not be located within the Pacific Electric Trail paved area.
- At a minimum, access for trail users must be maintained daily between 5:00 a.m. and 9:00 p.m. during the installation and removal of falsework during construction.

As summarized above, based on review of preliminary engineering efforts to-date for the proposed I-15 Corridor Project, Caltrans anticipates concluding that the proposed project will result in no use of Coyote Canyon Park, and that regarding the Pacific Electric Trail, the project satisfies the criteria for a Temporary Occupancy exception as set forth in 23 CFR 774.13(d).

As detailed in the regulation, five conditions need to be satisfied in order to meet the temporary occupancy exception. Those conditions, and the basis for Caltrans' determination as to how each is satisfied with respect to the Pacific Electric Trail, are summarized as follows:

1. Duration 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.
 - Duration of the Etiwanda Overhead structure construction is estimated to be approximately 6 months with up to 3 weeks to install the falsework and up to 3 weeks to remove the falsework.
 - Overall project construction is scheduled for a duration of approximately 36 months (3 years).
 - Duration of construction of the part of the project associated with the Etiwanda Overhead structure will be less than the overall time needed for construction of the project.
 - There will be no change in ownership of the land related to the Pacific Electric Trail.
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal.
 - Impacts to use of the Pacific Electric Trail would be limited to temporary impacts associated with the installation and removal of falsework around the Pacific Electric Trail. The trail would be able to remain open throughout construction of the Etiwanda Overhead

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Ms. Debbie Brazill
December 4, 2017
Page 4

with the exception of when the falsework is installed and removed. A full closure of the Pacific Electric Trail would be necessary for no more than two to three weeks from 9 p.m. to 5 a.m. during the installation of falsework below the Etiwanda Overhead. The trail would again be closed for no more than two to three weeks from 9 p.m. to 5 a.m. during the removal of the falsework. The City of Fontana would receive closure information a minimum of 90 days in advance so that the City would be able to provide 30 days advance notice to residents.

3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.
 - There will be no permanent adverse physical impacts to the Pacific Electric Trail. The proposed project would require construction of a third structure that would tie into the two existing separate bridge structures, covering the gap between the northbound and southbound freeway lanes at this location. Based on preliminary engineering efforts to-date, all support columns would be constructed outside the limits of the Pacific Electric Trail, which is consistent with the location of existing columns. Additionally, all other improvements in this area would be located entirely within the existing limits of the I-15 right of way. No portion of the Pacific Electric Trail located within the limits of the City of Fontana would be incorporated into the project. While the new structure between the northbound and southbound freeways will cover the trail, the freeway bridge is of sufficient height, and the overall width of the combined structures is sufficiently limited so that the trail will still experience substantial natural light during daytime, and the performance of existing night lighting that is already installed along the trail at approximately 150' intervals, will not be impacted.
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project;
 - Upon completion of the Etiwanda Overhead improvements and the removal of falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.
 - Review of this letter by the City of Fontana Development Services Department, and return with your signature (or authorized designee) in the signature block provided will satisfy this requirement.

Because it is planned that the I-15 Corridor Project will be constructed utilizing the Design/Build method, it is being stipulated that if the scope of work for the portions of the proposed project located within half a mile of Coyote Canyon Park or the Pacific Electric Trail, changes during the Final Design phase of this Project, and if Caltrans determines during reviews of the associated Final Design documents that the associated proposed changes could potentially impact Coyote Canyon Park and/or the Pacific Electric Trail (temporarily or permanently), Caltrans will pursue follow-up coordination

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Ms. Debbie Brazill
December 4, 2017
Page 5

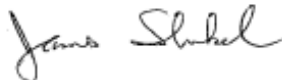
with the City of Fontana Development Services Department, in accordance with all applicable requirements pursuant to 23 CFR 774.

With this letter Caltrans is respectfully requesting your agreement with Caltrans' determinations regarding the proposed I-15 Corridor Project and Coyote Canyon Park and the Pacific Electric Trail. A reference summary and your signature block are provided following this letter for your convenience to provide your agreement.

The enclosed figures provide an overview of the proposed project footprint and a closer perspective of the portion of the proposed project that is located in the vicinity of the Interstate 15 / Duncan Canyon Road interchange and the portion of the Pacific Electric Trail that crosses under I-15.

If there are any questions or concerns, I may be contacted directly by phone at (909) 383-6379 or via email: james.shankel@dot.ca.gov.

Sincerely,



JAMES SHANKEL
Senior Environmental Planner
Environmental Planning

Enclosures:

1. I-15 Corridor Project Alignment Map
2. I-15 Corridor Project—Coyote Canyon Park
3. I-15 Corridor Project—Pacific Electric Trail
4. Pacific Electric Trail Visual Simulation
5. Etiwanda Overhead (Widening)

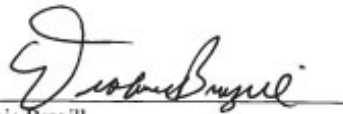
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The City of Fontana Development Services Department acknowledges Caltrans' coordination and consultation regarding Section 4(f) considerations pertinent to the City's Coyote Canyon Park and the portion of Pacific Electric Trail located within the City of Fontana. As summarized in Caltrans' letter to the City in this regard, it is understood that the construction of SBCTA's proposed I-15 Corridor Project would require improvements to the Etiwanda Overhead, the existing I-15 bridge structures that cross over the Pacific Electric Trail, as depicted on the attached figures, "I-15 Corridor Project Coyote Canyon Park," "I-15 Corridor Project Pacific Electric Trail" and "Etiwanda OH (Widen)." It is the City's understanding and expectation that construction of the proposed I-15 Corridor Project would only impact the associated portion of the Pacific Electric Trail on a temporary basis, as identified, specific to the installation and removal of falsework associated with the construction of the bridge improvements.

The City of Fontana Development Services Department supports and expects that use of the Pacific Electric Trail will be disrupted to the least extent possible during construction, and expects the measures to avoid or minimize potential impacts, will be implemented as detailed.

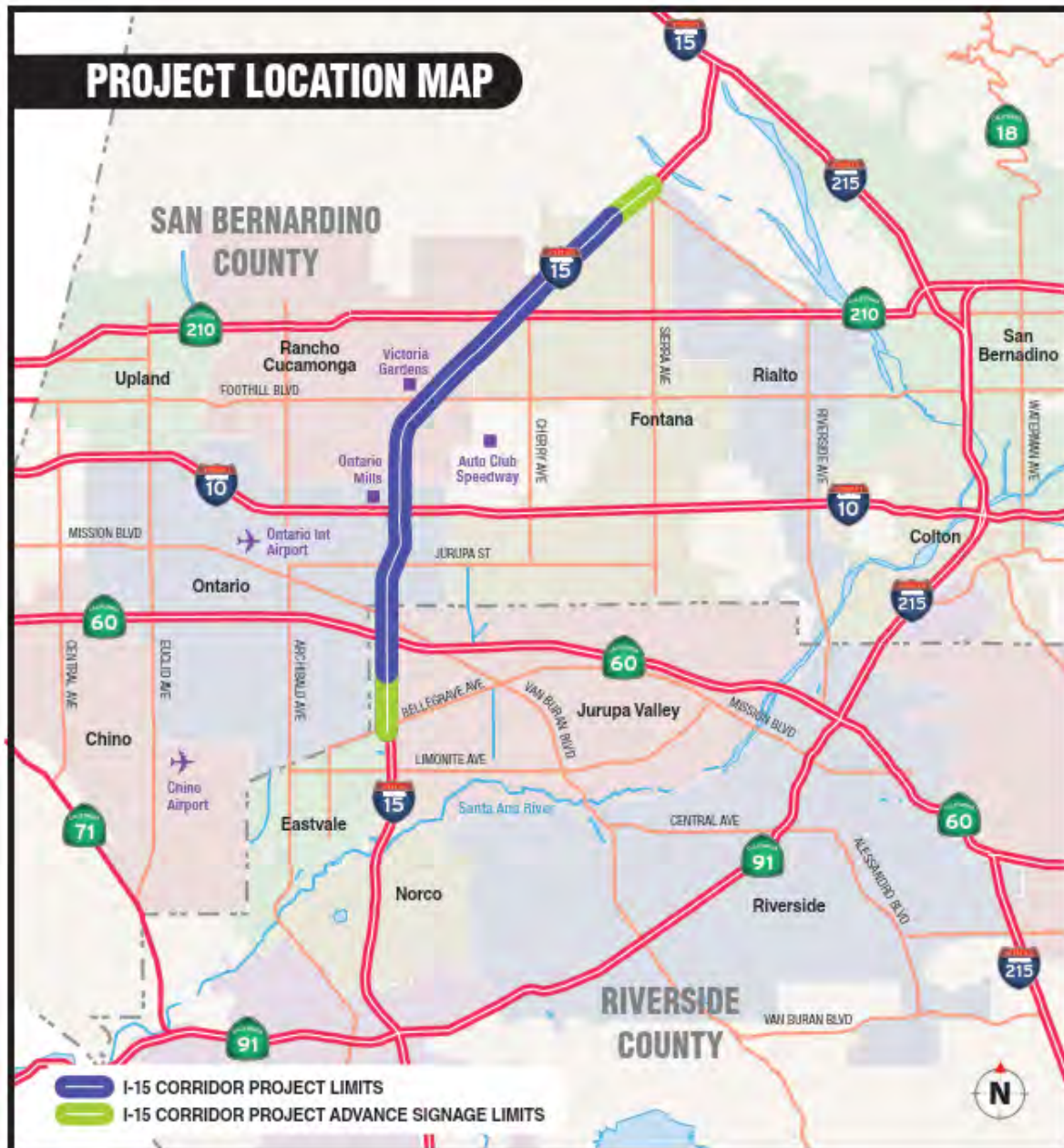
The signature below represents written agreement by the City of Fontana Development Services Department that the Section 4(f) temporary occupancy exception applies to the construction of the proposed I-15 Corridor Project improvements to the Etiwanda Overhead, which would require a temporary closure of a limited portion of Pacific Electric Trail, as the following five conditions set forth in 23 CFR 774.13(d) are satisfied:

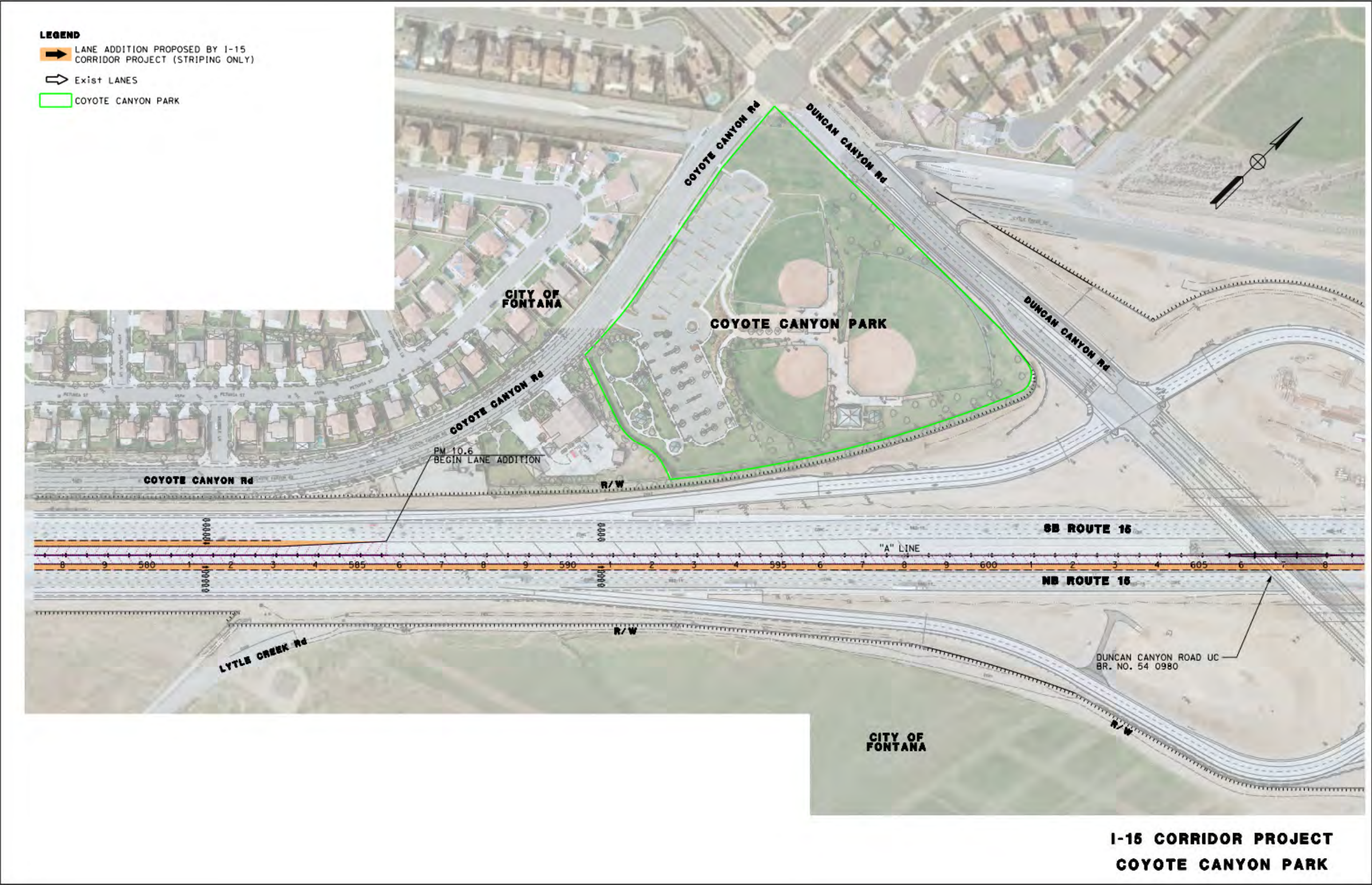
1. Duration of occupancy must be temporary (i.e., less than the time needed for construction of the project) and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;
3. There are 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;
4. 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
5. There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.


Debbie Brazill
Deputy City Manager
City of Fontana Development Services
City of Fontana

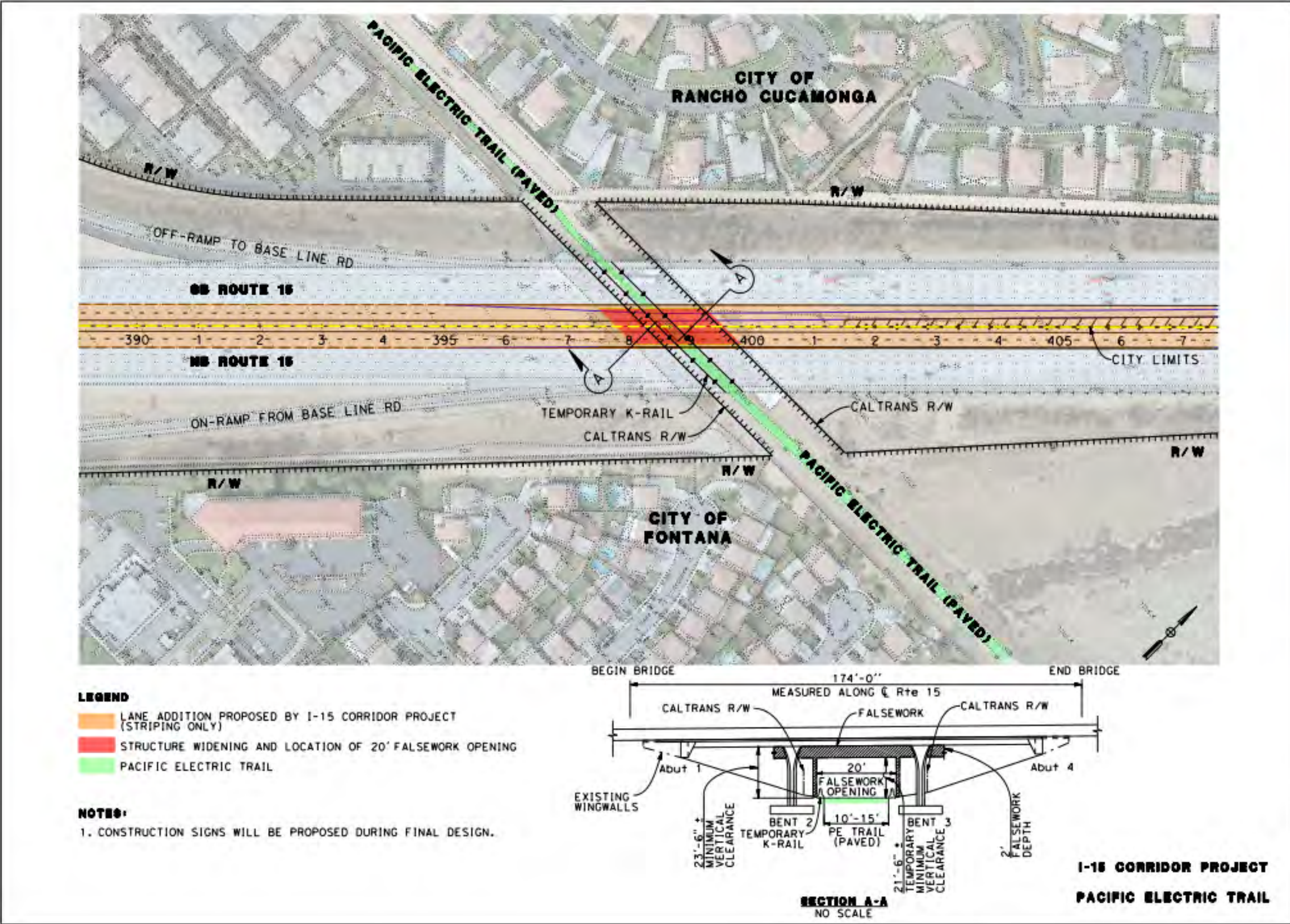
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Date

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Pacific Electric Trail Visual Simulation



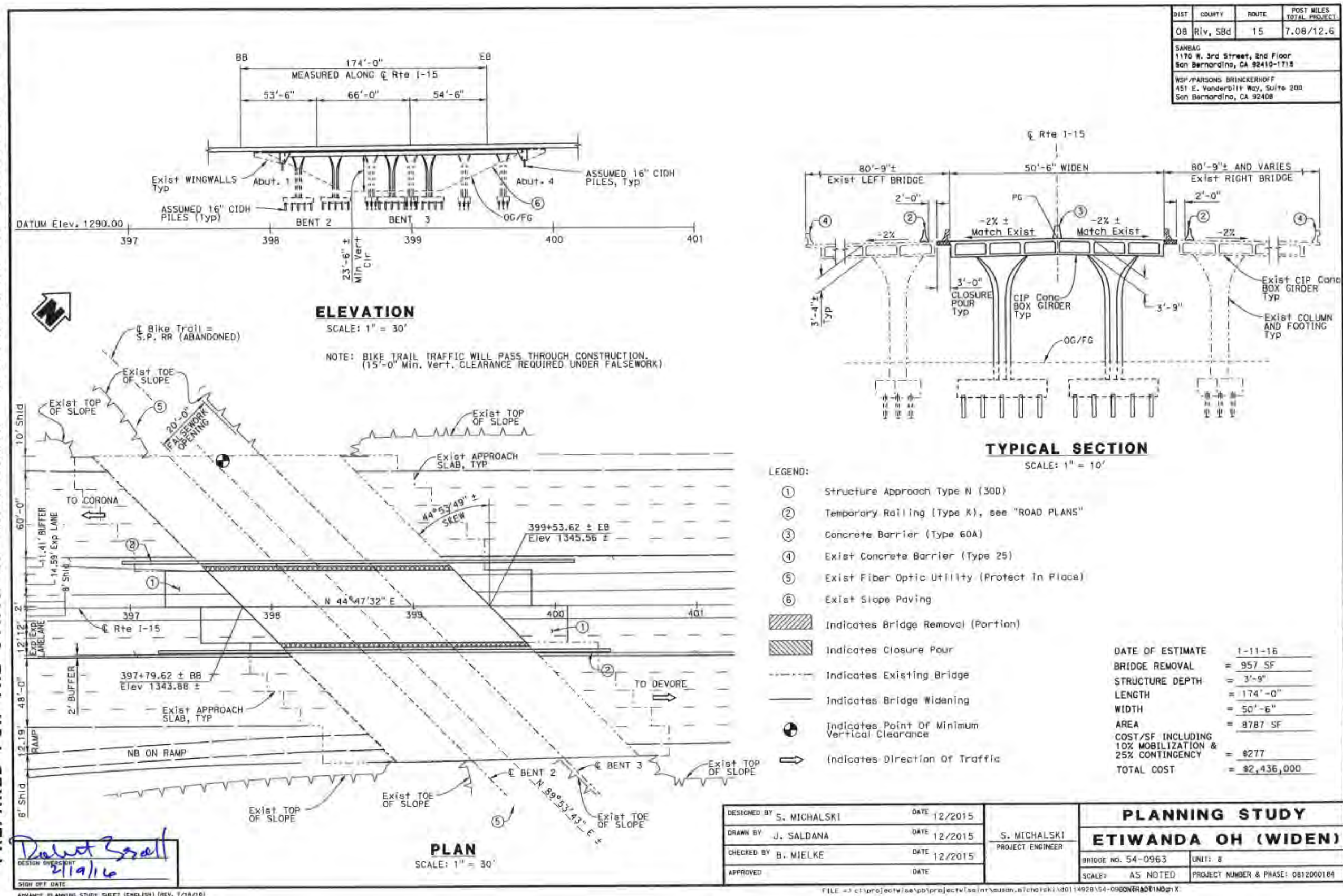
Existing conditions photograph. Taken from the Pacific Electric Trail under I-15, looking east



Photo-simulation condition with the proposed Interstate 15 Corridor Project

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PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



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STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

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*Make Conservation
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January 22, 2018

Mr. Mike Smith
Senior Planner
City of Rancho Cucamonga
10500 Civic Center Drive
Rancho Cucamonga, CA 91730

Dear Mr. Smith:

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to construct Express Lanes on I-15 from approximately 0.3 mile south of Cantu-Galleano Ranch Road in the Cities of Eastvale and Jurupa Valley at post mile 49.8 in Riverside County to approximately 1.2 miles north of Duncan Canyon Road at post mile 12.2 in the City of Fontana in San Bernardino County, with the proposed I-15 Corridor Project. The project would add two (2) Express Lanes in each direction between SR-60 and SR-210, one (1) Express Lane in each direction between Cantu-Galleano Ranch Road and SR-60 and one (1) Express Lane in each direction between SR-210 and Duncan Canyon Road. This project also proposes to add one (1) Auxiliary Lane in each direction between SR-60 and I-10 and one (1) Auxiliary Lane in the northbound direction between Fourth Street and Foothill Boulevard. The project construction limits at the southerly end extend approximately 1.3 miles south of the Cantu-Galleano Ranch Road Overcrossing and at the northerly end extend approximately 1.6 miles north of Duncan Canyon Road Overcrossing, to allow for the placement of advanced signage for express lanes.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA), and Caltrans is also the lead agency under the National Environmental Policy Act (NEPA). Regarding NEPA, the Federal Highway Administration (FHWA) assigned, and Caltrans assumed effective July 1, 2007 under the NEPA Pilot Program, all of the Secretary of the United States Department of Transportation responsibilities under NEPA for environmental coordination and consultation under federal environmental laws pertaining to the review or approval of projects, and since October 1, 2012 Caltrans has continued to assume these responsibilities under NEPA Assignment. This assignment includes projects on the State Highway System. 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.

Pursuant to Section 4(f) of the Department of Transportation Act of 1966 (Title 49 USC Section 303) and 23 CFR 774.17, Coyote Canyon Park and the Pacific Electric Trail are recognized as Section 4(f) resources. Preliminary engineering efforts to-date for the proposed project have been reviewed by Caltrans, to determine if and/or to what extent, the proposed I-15 Corridor Project might impact the Pacific Electric Trail.

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Mr. Mike Smith
January 22, 2018
Page 2

The Pacific Electric Trail is a regional recreational facility that crosses into the city of Rancho Cucamonga within the project limits. As shown in the attached "I-15 Corridor Project Pacific Electric Trail" figure, the Pacific Electric Trail crosses underneath the existing I-15, which consists of two bridge structures (one for northbound traffic and one for southbound traffic), identified overall as the Etiwanda Overhead (OH). The portion of the Pacific Electric Trail west of the existing highway centerline is within the jurisdiction of the City of Rancho Cucamonga. The proposed project would require construction of a third structure that would tie into the two existing separate bridge structures, covering the gap between the northbound and southbound freeway lanes at this location. Based on preliminary engineering efforts to-date, all support columns would be constructed outside the limits of the Pacific Electric Trail. Additionally, all other improvements in this area would be located entirely within the existing limits of the I-15 right of way.

During construction, falsework would be installed around the Pacific Electric Trail. The trail would be able to remain open throughout construction of the Etiwanda Overhead with the exception of when the falsework is installed and removed. A full closure of the Pacific Electric Trail would be necessary for no more than two to three weeks from 9 p.m. to 5 a.m. during the installation of falsework below the Etiwanda Overhead. The trail would again be closed for no more than two to three weeks from 9 p.m. to 5 a.m. during the removal of the falsework. The City of Rancho Cucamonga would receive closure information a minimum of 90 days in advance of the closure so that the City can coordinate with the SBCTA to 1) inform the Trails Advisory Committee of the proposed work, and 2) determine the appropriate alternate reroute/detour information and applicable signs. SBCTA shall provide notice of the closure to all property owners and residents within 660 feet of the limits of the area of work a minimum of 30 days in advance of the closure. Upon completion of the Etiwanda Overhead improvements and the removal of falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.

To avoid or minimize potential impacts to the Pacific Electric Trail during construction, the following will be incorporated into the construction contract:

- In the area of the Etiwanda Overhead, the construction contractor shall install all falsework during defined nighttime hours. The falsework required to construct the Etiwanda Overhead shall not be located within the Pacific Electric Trail paved area.
- At a minimum, access for trail users must be maintained daily between 5:00 a.m. and 9:00 p.m. during the installation and removal of falsework during construction.

As summarized above, based on review of preliminary engineering efforts to-date for the proposed I-15 Corridor Project, Caltrans anticipates concluding that the proposed project will result in no use of the Pacific Electric Trail; the project satisfies the criteria for a Temporary Occupancy exception as set forth in 23 CFR 774.13(d).

As detailed in the regulation, five conditions need to be satisfied in order to meet the temporary occupancy exception. Those conditions, and the basis for Caltrans' determination as to how each is satisfied with respect to the Pacific Electric Trail, are summarized as follows:

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Mr. Mike Smith
January 22, 2018
Page 3

1. Duration 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.
 - Duration of the Etiwanda Overhead structure construction is estimated to be approximately 6 months with up to 3 weeks to install the falsework and up to 3 weeks to remove the falsework.
 - Overall project construction is scheduled for a duration of approximately 36 months (3 years).
 - Duration of construction of the part of the project associated with the Etiwanda Overhead structure will be less than the overall time needed for construction of the project.
 - There will be no change in ownership of the land related to the Pacific Electric Trail.
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal.
 - Impacts to use of the Pacific Electric Trail would be limited to temporary impacts associated with the installation and removal of falsework around the Pacific Electric Trail. The trail would be able to remain open throughout construction of the Etiwanda Overhead with the exception of when the falsework is installed and removed. A full closure of the Pacific Electric Trail would be necessary for no more than two to three weeks from 9 p.m. to 5 a.m. during the installation of falsework below the Etiwanda Overhead. The trail would again be closed for no more than two to three weeks from 9 p.m. to 5 a.m. during the removal of the falsework. The City of Rancho Cucamonga would receive closure information a minimum of 90 days in advance of the closure so that the City can coordinate with the SBCTA to 1) inform the Trails Advisory Committee of the proposed work, and 2) determine the appropriate alternate reroute/detour information and applicable signs. SBCTA shall provide notice of the closure to all property owners and residents within 660 feet of the limits of the area of work a minimum of 30 days in advance of the closure.
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.
 - There will be no permanent adverse physical impacts to the Pacific Electric Trail. The proposed project would require construction of a third structure that would tie into the two existing separate bridge structures, covering the gap between the northbound and southbound freeway lanes at this location. Based on preliminary engineering efforts to-date, all support columns would be constructed outside the limits of the Pacific Electric Trail, which is consistent with the location of existing columns. Additionally, all other improvements in this area would be located entirely within the existing limits of the I-15 right of way. No portion of the Pacific Electric Trail located within the limits of the City of Rancho Cucamonga would be incorporated into the project. While the new structure between the northbound and southbound freeways will cover the trail, the freeway bridge is of sufficient height, and the overall width of the combined structures is sufficiently limited so that the trail will still experience substantial natural light during daytime, and the performance of existing night lighting that is already installed along the trail at approximately 150' intervals, will not be impacted.

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Mr. Mike Smith
January 22, 2018
Page 4

4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project;
 - Upon completion of the Etiwanda Overhead improvements and the removal of falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.
 - Review of this letter by the City of Rancho Cucamonga Planning Department, and return with your signature (or authorized designee) in the signature block provided will satisfy this requirement.

Because it is planned that the I-15 Corridor Project will be constructed utilizing the Design/Build method, it is being stipulated that if the scope of work for the portion of the proposed project located within half a mile of the Pacific Electric Trail changes during the Final Design phase of this Project, and if Caltrans determines during reviews of the associated Final Design documents that the associated proposed changes could potentially impact the Pacific Electric Trail (temporarily or permanently), Caltrans will pursue follow-up coordination with the City of Rancho Cucamonga, in accordance with all applicable requirements pursuant to 23 CFR 774.

With this letter Caltrans is respectfully requesting your agreement with Caltrans' determination regarding the proposed I-15 Corridor Project and the Pacific Electric Trail. A reference summary and your signature block are provided following this letter for your convenience to provide your agreement.

The enclosed figures provide an overview of the proposed project footprint and a closer perspective of the portion of the proposed project that is located in the vicinity of the portion of the Pacific Electric Trail that crosses under I-15.

If there are any questions or concerns, I may be contacted directly by phone at (909) 383-6379 or via email: james.shankel@dot.ca.gov.

Sincerely,



JAMES SHANKEL
Senior Environmental Planner Environmental
Planning

Enclosures:

1. I-15 Corridor Project Alignment Map
2. I-15 Corridor Project—Pacific Electric Trail
3. Pacific Electric Trail Visual Simulation
4. Etiwanda Overhead (Widening)

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability."*

The City of Rancho Cucamonga acknowledges Caltrans' coordination and consultation regarding Section 4(f) considerations pertinent to the portion of Pacific Electric Trail located within the City of Rancho Cucamonga. As summarized in Caltrans' letter to the City in this regard, it is understood that the construction of SBCTA's proposed I-15 Corridor Project would require improvements to the Etiwanda Overhead, the existing I-15 bridge structures that cross over the Pacific Electric Trail, as depicted on the attached figure, "I-15 Corridor Project Pacific Electric Trail" and "Etiwanda OH (Widen)." It is the City's understanding and expectation that construction of the proposed I-15 Corridor Project would only impact the associated portion of the Pacific Electric Trail on a temporary basis, as identified, specific to the installation and removal of falsework associated with the construction of the bridge improvements.

The City of Rancho Cucamonga expects that use of the Pacific Electric Trail will be disrupted to the least extent possible during construction, and expects the measures to avoid or minimize potential impacts, will be implemented as detailed.

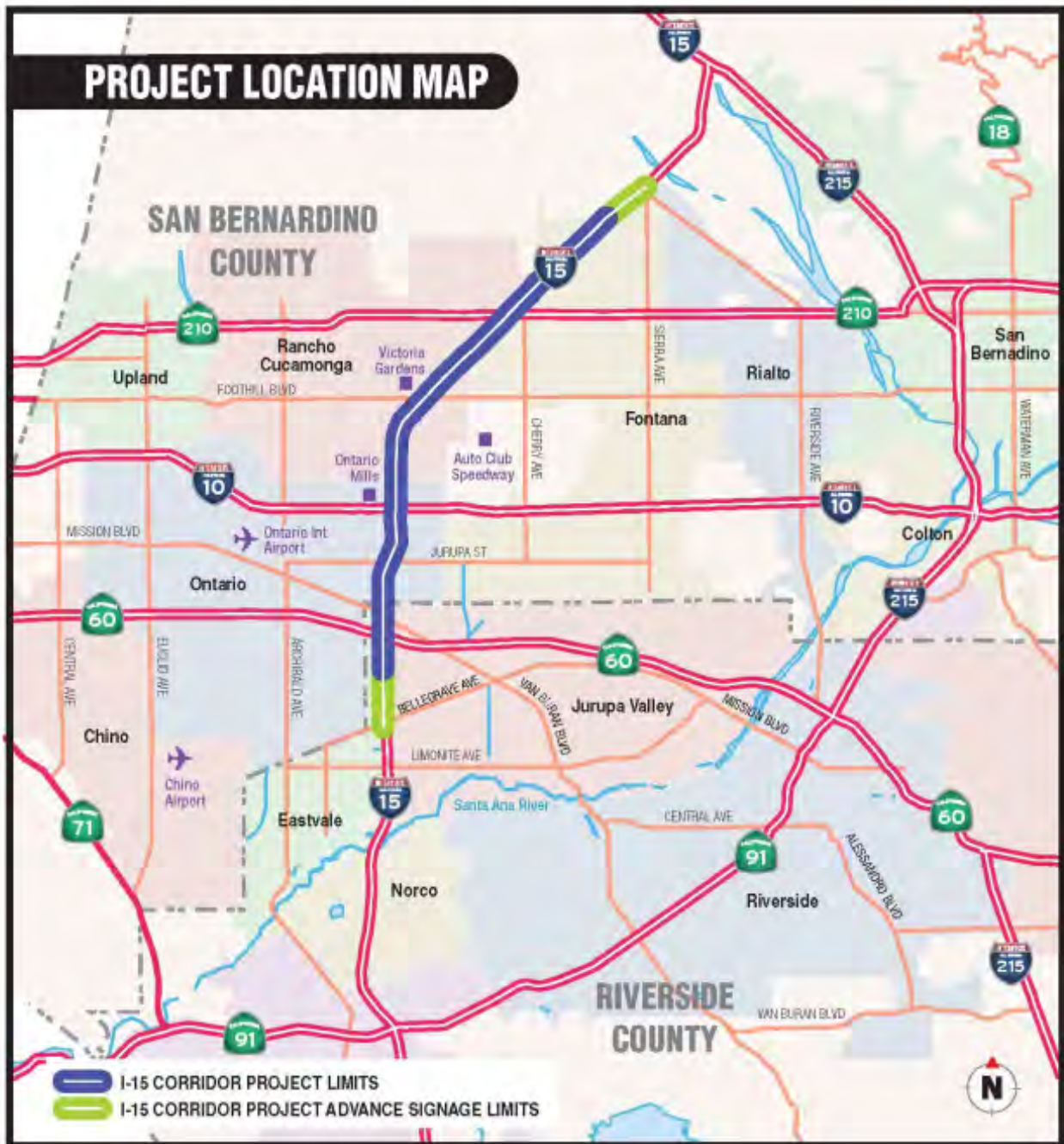
The signature below represents written agreement by the City of Rancho Cucamonga that the Section 4(f) temporary occupancy exception applies to the construction of the proposed I-15 Corridor Project improvements to the Etiwanda Overhead, which would require a temporary closure of a limited portion of Pacific Electric Trail, as the following five conditions set forth in 23 CFR 774.13(d) are satisfied:

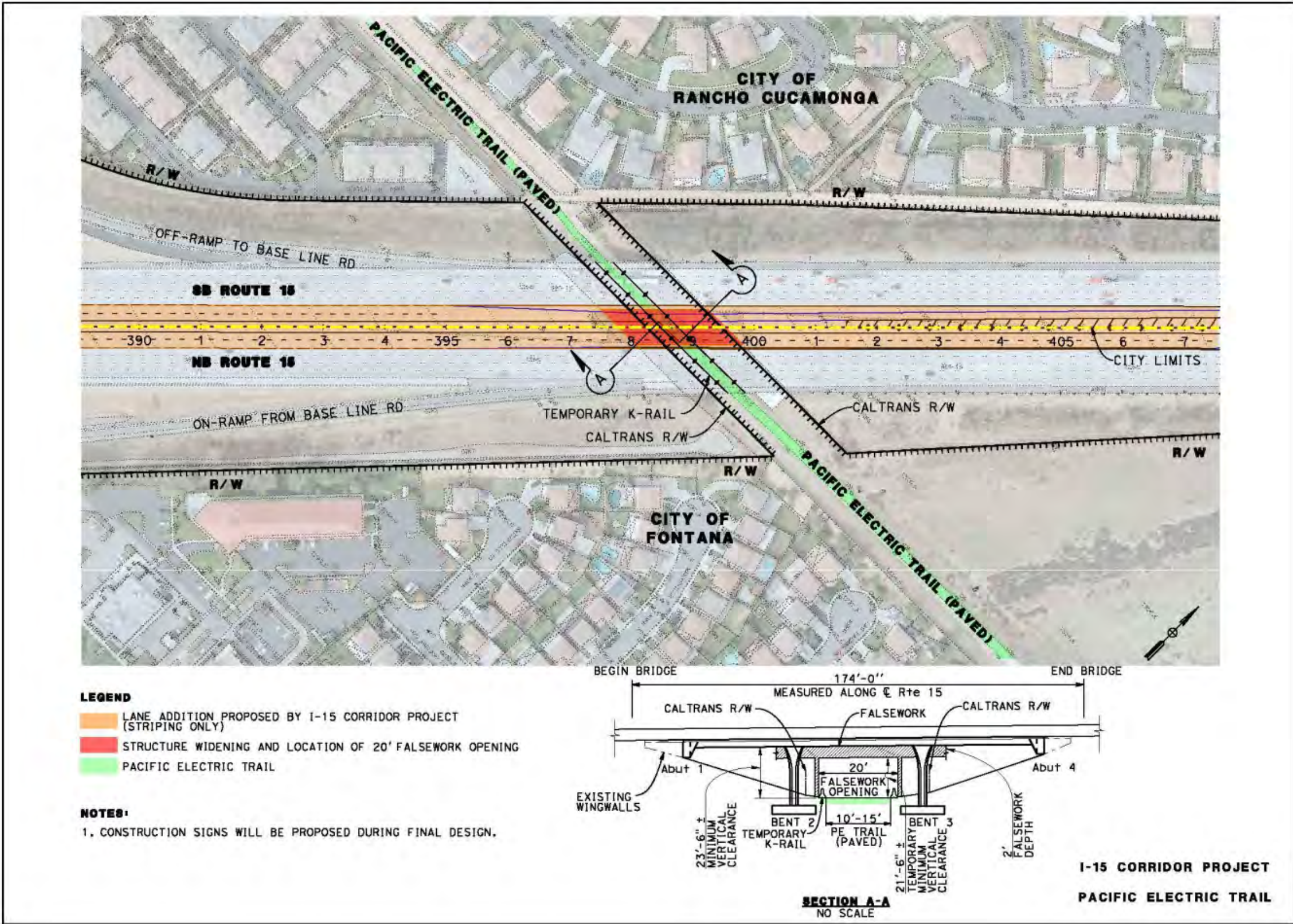
1. Duration of occupancy must be temporary (i.e., less than the time needed for construction of the project) and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;
3. There are 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;
4. 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
5. There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.



Mike Smith
Senior Planner
City of Rancho Cucamonga Planning Department
City of Rancho Cucamonga

01/23/18
Date





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Attachment - Pacific Electric Trail under I-15: Existing Condition Photograph and Proposed Condition Photo Simulation

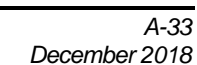


Existing conditions photograph. Taken from the Pacific Electric Trail under I-15, looking west.



Photo-simulation condition with the proposed Interstate 15 Corridor Project.

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Appendix B. Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
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*Making Conservation
a California Way of Life.*

April 2018

**NON-DISCRIMINATION
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

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, 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.

Environmental Commitments Record

SBD Interstate 15 Corridor Project
DISTRICT 8 – RIV – 15 (PM 49.8/52.3), SBD – 15 (PM 0.0/12.2)
PN 0812000184 / EA 08-0R8000

Date of ECR: December 14, 2018

Type of Environmental
Compliance:

CEQA: IS with MND

NEPA: EA with FONSI

Project Phase:

☒ PA/ED(FED)

☐ PS&E

☐ Revalidation

☐ Ready To List

☐ Construction

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
Community Impacts											
COM-1	SBCTA will create a Low-Income Equity Program, which will include policies to enable low-income households to utilize the proposed project improvements, such as waiving account maintenance fees, allowing the use of cash to open and replenish toll accounts, and/or implementing video license plate recognition as an alternative to toll-collection technology.	2-119	Community Impact Assessment, October 2017	SBCTA	On-going						
Visual/Aesthetics											
VA-1	Retain as much vegetation as possible, particularly the mature trees that are between the highway and adjacent land uses.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/PCM/ Design-Builder	Construction/Design-Build						
VA-2	Where feasible, set up construction staging areas in locations that are out of sight from a majority of viewers.	2-219	Visual Impact Assessment, May 2017	PCM/ Design-Builder	Construction/Design-Build						
VA-3	Shield construction lighting and/or focus lighting on work areas to minimize ambient spillover into adjacent areas.	2-219	Visual Impact Assessment, May 2017	PCM/Design-Builder	Construction/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
VA-4	Survey and document the existing visual character of construction staging areas prior to construction and restore construction staging areas to pre-project conditions once construction is complete.	2-219	Visual Impact Assessment, May 2017	PCM/Design-Builder	Construction/Design-Build						
VA-5	Contour cuts and fills to visually blend with the surrounding landscape to the full extent possible.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/PCM/Design-Builder	Construction/Design-Build						
VA-6	Apply a consistent color and aesthetic treatment, like texturizing and scoring, to new structures such as sound walls, retaining walls, medians, or bridge abutments to facilitate a common visual theme with other highway structures in the project area.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/ PCM/Design-Builder	Construction/Design-Build						
VA-7	To the extent possible, apply a consistent landscape treatment throughout the project area to promote visual continuity. Landscape plantings should be consistent with the existing landscape within the project area. Supplemental water will be needed during the plant establishment period. The replacement ratio to be determined by the District Landscape Architect.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/ PCM/Design-Builder	Construction/Design-Build						
VA-8	Replace disturbed landscaping related to existing Classified Landscaped Freeway segments within the project limits to maintain the designation.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/ PCM/Design-Builder	Construction/Design-Build						
VA-9	Provide new soffit lighting under the new bridge decking to provide needed visibility for pedestrian safety during evening and nighttime hours.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/ PCM/Design-Builder	Construction/Design-Build						
VA- 10	Vine planting with irrigation on one or both sides of soundwalls must be included wherever feasible (given Caltrans setback and maintenance requirements). If vines can only be planted on one side of the wall, vine portals will be included in the wall design to accommodate vine access to both sides of the wall.	2-219	Visual Impact Assessment, May 2017	District Landscape Architect/ PCM/Design-Builder	Construction/Design-Build						
Paleontological Resources											
P-1	<p>A Paleontological Mitigation Plan (PMP) that follows Caltrans guidelines and the recommendations of the Society of Vertebrate Paleontology (SVP) will be prepared. The measures in this PMP will be conducted by a qualified vertebrate paleontologist. The PMP is anticipated to include, but not be limited to, the following mitigation measures:</p> <ul style="list-style-type: none"> a. A project-specific PMP will be prepared by a qualified principal paleontologist (MS or PhD in paleontology) once adequate project design information regarding subsurface disturbance location, depth, and lateral extent is available. b. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas may be halted or diverted by the Resident Engineer to allow the prompt recovery of fossils. c. Fossils collected during the monitoring and salvage portion of the mitigation program will be prepared to the point of identification, sorted, and cataloged. d. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program. e. The qualified principal paleontologist will be present at pre-construction meetings to confer with contractors who will be performing ground-disturbing activities. f. Paleontological monitors, under the direction of the qualified principal paleontologist, will be on site to inspect cuts for fossils at all times during original ground disturbance involving sensitive geologic formations. 	2-269	Paleontological Identification Report/ Paleontological Evaluation Report (PIR/PER), February 2017	District Paleontologist/ PCM/Design-Builder	Construction/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
	g. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited in a scientific institution with paleontological collections.										
Hazardous Waste/Materials											
HAZ-1	Prepare and implement a soil management plan to address the arsenic contamination identified beneath the Etiwanda Overhead. The soil management plan should consist of segregation and stockpiling of soils excavated between 1.0 and 5.0 feet below ground level in the vicinity of the Etiwanda Overhead, waste profile sampling of segregated soils, and, if necessary disposal of arsenic impacted soil at an approved disposal facility.	2-284	Site Investigation and Aerial Deposited Lead Survey (ADL), June 2017	Environmental Engineering/PCM/ Design-Builder	Construction/Design-Build						
Air Quality											
AQ-1	Use electricity from power poles, rather than temporary diesel- or gasoline powered generators if or where feasible.	2-309	Air Quality Report, December 2017	Environmental Engineering/PCM/ Design -Builder	Construction/Design-Build						
AQ-2	Use on-site mobile equipment powered by alternative fuel sources (i.e., methanol, natural gas, propane, or butane) as feasible.	2-309	Air Quality Report, December 2017	Environmental Engineering/PCM/ Design -Builder	Construction/Design-Build						
AQ-3	Use solar-powered portable changeable message signs boards.	2-309	Air Quality Report, December 2017	Environmental Engineering/PCM/ Design -Builder	Construction/Design-Build						
AQ-4	Provide Schools with advance notice of construction activity anticipated to occur within 1000 feet of the school property.	2-309	IS/EA	Environmental Engineering/PCM/ Design -Builder	Construction/Design-Build						
Noise											
NOI-1	The Design-Builder will complete construction of all sound walls (S-344, S-353, S-396, and S-411) prior to commencement of heavy civil and structural work on the freeway between Foothill Boulevard Undercrossing and Victoria Street Undercrossing to reduce construction and operational noise impacts to developments adjacent to the corresponding portions of the project area that include sensitive receptors. Any work which would occur prior to construction of soundwalls S-310, S-344 S-353, and S-396, would be related to the construction of the soundwalls and could include, but is not limited to, activities such as; clearing and grubbing, installing signs, utility relocation, drainage, irrigation, and foundation work.	2-421	Noise Study Report (NSR), July 2017 and NSR Addendum, August 2018	Environmental Engineering/PCM/ Design-Builder	PA&ED/ Design/ Design-Build						
Biological Resources											
Natural Communities (Including MSHCP riparian/riverine resources)											
NC-1	Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around natural communities adjacent to the limits of disturbance to designate environmentally sensitive areas (ESAs) to be preserved. No additional fencing will be placed where San Bernardino kangaroo rat exclusion fencing is placed (see Section 2.3.5). No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Silt fence barriers will be installed at the ESA boundary, which is within Caltrans ROW, to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.	2-532	Natural Environment Study, January 2018	District Biologist/ PCM/Design-Builder	Construction/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
NC-2	Hydrologic connectivity will be maintained within drainages during the duration of construction. Brush, debris material, mud, silt, or other pollutants from construction activities will not be placed within drainages and will not be allowed to enter a flowing stream.	2-532	Natural Environment Study, January 2018	Biologist/Stormwater Engineer/PCM/Design-Builder	Construction/Design-Build						
NC-3	The Permittee shall have the right to access and inspect the project site to ensure compliance with project approval conditions, including BMPs.	2-534	Natural Environment Study, January 2018	Biologist/Stormwater Engineer/PCM/Design-Builder	Construction/Design-Build						
Wetland and Other Waters (Including MSHCP riparian/ riverine resources)											
WET-1	Hydrologic connectivity will be maintained within drainages during the duration of construction. Brush, debris material, mud, silt, or other pollutants from construction activities will not be placed within drainages and will not be allowed to enter a flowing stream.	2-537	Natural Environment Study, January 2018	Biologist/ Storm water Engineer/PCM/ Design-Builder	Construction/Design-Build						
WET-2	The limits of disturbance, including the upstream, downstream, and lateral extents on either side of any stream adjacent to the project, will be clearly defined and marked in the field. The designated biologist will review the limits of disturbance prior to initiation of construction activities (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). The upstream and downstream limits of disturbance plus the lateral limits of disturbance on either side of the stream will be clearly defined and marked in the field, including Environmentally Sensitive Areas (ESAs) fencing installed during construction to ensure avoidance of jurisdictional areas and riparian habitat. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.	2-538	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design-Build						
WET-3	No grading or fill activity of any type will be permitted within ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby preserved areas. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material into wetlands and other waters	2-538	Natural Environment Study, January 2018	Biologist/ PCM/Design-Builder	Construction/Design-Build						
WET-4	Project impacts on jurisdictional waters of the U.S. and waters of the state will be mitigated at a minimum 3:1 ratio for permanent impacts and a minimum 1:1 ratio for temporary impacts, at an approved mitigation bank, applicant sponsored mitigation area, or on site. A total of 4.98 acres of mitigation credits will be purchased for project impacts on non-wetland Waters of the US and non-wetland Waters of the State.	2-538	Natural Environment Study, January 2018	District Biologist/PCM/ Design-Builder	Design/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
Plant Species (Same as Measures NC-1 through NC-7)											
Animal Species											
ANI-1	In the event that vegetation clearing is necessary during the breeding season for passerine birds (i.e., February 1–September 1) or raptors (January 1–September 1), the designated biologist will conduct a preconstruction survey of construction areas and an appropriate buffer no more than 72 hours prior to construction to identify the locations of avian nests. An initial buffer of 500-feet for raptors and special-status species and 300-feet for all other avian species will be established around each nest site, with buffer reductions as needed based on the designated biologist’s professional opinion. To the extent feasible, no construction will take place within this buffer until the nest is no longer active. In the event that construction must occur within the buffer areas, the designated biologist, in coordination with the Department, will take steps to ensure construction activities do not disturb or disrupt nesting activities. If the designated biologist determines that construction activities are disturbing or disrupting nesting activities, then they will notify the Resident Engineer, who has the authority to halt construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, preventing idling of vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, or working in other areas until the young have fledged.	2-556	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-2	A biologist will monitor construction within the vicinity of sensitive natural community areas prior to vegetation removal to ensure that wildlife species are not present and to ensure that vegetation removal, BMPs, and all avoidance and minimization measures are properly implemented. Preconstruction clearance surveys for sensitive wildlife species will be performed within 72 hours prior to construction. No nesting birds will be flushed during the nesting season. Special-status bats will not be flushed but will be protected as specified in measures ANI-9 through ANI-12. Burrowing wildlife will be relocated from the site of temporary or permanent impacts as feasible during preconstruction clearance surveys.	2-556	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-3	A qualified biologist will conduct a training session for project and construction personnel (MSHCP Volume I, Section 7.5.3) prior to grading. The training will include a description of the species of concern and their habitats, the general provisions of the Endangered Species Acts (FESA and CESA) and the MSHCP, the need to adhere to the provisions of the acts and the MSHCP, the penalties associated with violating the provisions of the acts, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and from the project site boundaries within which the project activities must be accomplished (MSHCP Volume I, Appendix C).	2-556	Natural Environment Study, January 2018	Biologist/ PCM/Design-Builder	Construction/Design- Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
ANI-4	The qualified project biologist will monitor construction activities for the duration of the project to ensure that practicable measures are being employed and avoid incidental disturbance of habitat and species of concern outside the project footprint (MSHCP Volume I, Section 7.5.3). Special attention will be provided to ensure that the ESA fencing is maintained. Additionally, ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of BMPs.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-5	A qualified biologist will perform a detailed field review and document the location of raptor and/or corvid nests along with sign of colonial nesting birds within the limits of disturbance and adjacent lands. This field review should occur in late spring/early summer to provide the best results.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-6	Openings will be installed at regular intervals in the concrete "K" rail barriers that will be placed in the existing fenced right-of-way in order to allow small wildlife to cross or escape roadways.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-7	A preconstruction survey for burrowing owl will be performed within 30 days prior to the start of construction activities. The survey area would be the project limits of disturbance and at least a 100-foot buffer.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-8	Should burrowing owl be detected within the BSA, avoidance and minimization measures will be developed in consultation with CDFW. Potential measures may include establishing an avoidance buffer around active burrows, eliminating potential unoccupied burrows, and/or passive relocation	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-9	Prior to the start of project construction, a daytime assessment will be conducted by a qualified bat biologist to reexamine structures that are suitable for bat use. If bat sign is observed at that time, then nighttime bat surveys will be conducted to confirm whether the structures with suitable habitat identified during the preliminary assessment are utilized by bats for day roosting and/or night roosting, to ascertain the level of bat foraging and roosting activity at each of these locations, and to perform exit counts to visually determine the approximate number of bats utilizing the roosts. Acoustic monitoring will also be used during these surveys to identify the bat species present and to determine an index of relative bat activity for that site on that specific evening.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-10	All work areas on existing bridges with potential bat roosting habitat will be cleared of all bats during the fall (i.e., September or October) outside of the maternity season (i.e., April 15–August 31) to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Exclusion efforts are to occur prior to the initiation of construction activities under the guidance and observation of a qualified bat biologist. Exclusionary devices should be used to exclude bats from directly affected work areas and avoid potential direct impacts. Such exclusion efforts must be continued to keep the structures free of bats throughout the duration of the construction activities or until construction at the location is deemed complete and bat use is again acceptable. All bat exclusion techniques would be coordinated between the Department and the resource agencies, as applicable.	2-557	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
ANI-11	Prior to tree removal or trimming, large trees and snags should be examined by a qualified bat biologist to ensure that no roosting bats are present. Palm frond trimming, if necessary, should be conducted outside the maternity season (i.e., April 15–August 31) to avoid potential mortality to flightless young.	2-558	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ANI-12	If maternity sites are identified during the preconstruction bat habitat suitability assessment, then no construction activities at that location will be allowed during the maternity season (i.e., April 15–August 31) unless a qualified bat biologist has determined the young have been weaned. If maternity sites are present, and it is anticipated that construction activities cannot be completed outside of the maternity season, then bat exclusion at maternity roost sites will be completed by CDFW and the qualified bat biologist either as soon as possible after the young have been weaned or outside of the maternity season or as otherwise approved by the qualified bat biologist in coordination with CDFW.	2-558	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
Threatened and Endangered Species											
ES-1	A USFWS-authorized biologist with knowledge of San Bernardino kangaroo rat and its habitat will function as a biological monitor. Prior to initiating project activities, the name(s) and resumes of all prospective authorized biologists will be submitted to the Palm Springs Fish and Wildlife Office (PSFWO). The authorized biologist will ensure compliance with the project avoidance and minimization measures and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The authorized biologist will report any noncompliance immediately to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices.	2-637	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ES-2	A USFWS-authorized biologist will be present onsite during construction within and adjacent to suitable and/or critical habitat to ensure that avoidance and minimization measures are in place according to specifications. The biologist will also monitor construction within the vicinity of San Bernardino kangaroo rat habitat at a frequency that will be determined prior to the beginning of construction, during the Pre-Construction Meeting, to ensure that avoidance and minimization measures are properly followed. The authorized biologist will report any noncompliance immediately to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices.	2-637	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						
ES-3	A Biological Resource Information (BRI) program for all construction personnel will be developed and implemented prior to construction. At a minimum, the program would include the following topics: (1) biology, conservation, and legal status of the San Bernardino kangaroo rat and its critical habitat; (2) responsibilities of the biological monitor; (3) delineation and flagging of adjacent habitat; (4) limitations on all movement of those employed onsite, including ingress and egress of equipment and personnel, to designated construction zones (personnel shall not be allowed access to adjacent sensitive habitats); (5) onsite pet prohibitions; (6) use of trash containers for disposal and removal of trash; and (7) project features designed to reduce the impacts on listed species and habitat and promote continued successful occupation of adjacent habitat areas.	2-638	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design- Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
ES-4	A preconstruction notification will be provided to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices in writing at least 5 days prior to project initiation.	2-638	Natural Environment Study, January 2018	District Biologist/PCM/ Design-Builder	Construction/Design-Build						
ES-5	Prior to ground disturbance in sensitive areas, limits of disturbance will be delineated and marked to be clearly visible to personnel on foot and in heavy equipment. All construction-related activities (e.g., vegetation removal, grading, equipment lay-down and storage, and contractor parking) will occur inside the limits of disturbance. Construction staging and equipment storage will be located outside of any potential habitat areas. All movement of contractors, subcontractors, or their agents and equipment will be restricted to the limits of disturbance, staging areas, and construction access routes.	2-638	Natural Environment Study, January 2018	Biologist/PCM/ Design-Builder	Construction/Design-Build						
ES-6	Prior to clearing or construction, a fence plan will be submitted to the Caltrans Resident Engineer and the Caltrans Stewardship and Monitoring Offices for approval. The authorized biologist experienced with San Bernardino kangaroo rat will be present onsite when the fence is installed to minimize the disturbance of San Bernardino kangaroo rat burrows from the fence installation. An exclusion fence design will be submitted to the PSFWO for approval at least 30 days prior to placement. The San Bernardino kangaroo rat exclusionary fencing will be inspected by the biological monitor at a frequency necessary to ensure that it is in place and properly maintained. Exclusion fencing will remain in place and be maintained until project construction is completed.	2-638	Natural Environment Study, January 2018	District Biologist/PCM/ Design-Builder	Design/Design-Build						
ES-7	Prior to clearing or construction, exclusion fencing will be installed around all San Bernardino kangaroo rat suitable habitat areas that will be avoided and are adjacent to the limits of disturbance and within the existing state right-of-way. No grading or fill activity of any type will be permitted within these areas. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within these areas. All construction equipment should be operated in a manner to prevent accidental damage to nearby avoidance areas. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where San Bernardino kangaroo rat suitable habitat vegetation is immediately adjacent to planned grading activities.	2-638	Natural Environment Study, January 2018	District Biologist/PCM/ Design-Builder	Construction/Design-Build						
ES-8	To the extent feasible, no nighttime work will be conducted in the area of San Bernardino kangaroo rat habitat; however, nighttime construction may be allowed on the roadways above the elevation of occupied habitat or in other areas where lighting will not affect San Bernardino kangaroo rat. If the work has to be performed during night time, then the lights will be shielded and/or directed away from the habitat to prevent light intrusion into the habitat area.	2-639	Natural Environment Study, January 2018	Biologist/ PCM/Design-Builder	Construction/Design-Build						
ES-9	A USFWS-approved authorized biologist and/or designated biologist will serve as the contact source for any personnel who might inadvertently kill or injure a San Bernardino kangaroo rat or who finds a dead, injured, or entrapped individual. The authorized biologist and/or designated biologist will be identified within the BRI. The designated authorized biologist's and/or designated biologist's name and telephone number will be provided to PSFWO.	2-639	Natural Environment Study, January 2018	Biologist/ PCM/Design-Builder	Construction/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
ES-10	Any personnel who inadvertently kill or injure a San Bernardino kangaroo rat will immediately report the incident to the authorized biologist and/or designated biologist, who will notify PSFWO immediately and in writing within 3 working days. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal, as well as any other pertinent information.	2-639	Natural Environment Study, January 2018	District Biologist/Biologist/PCM/Design-Builder	Construction/Design-Build						
ES-11	No pets will be allowed in, or adjacent to, the project site.	2-639	Natural Environment Study, January 2018	Biologist/PCM/Design-Builder	Construction/Design-Build						
ES-12	Rodenticides, herbicides, insecticides, or other chemicals that could potentially harm San Bernardino kangaroo rat will not be used.	2-639	Natural Environment Study, January 2018	Biologist/PCM/Design-Builder	Construction/Design-Build						
ES-13	Trash will be stored in closed containers so that it is not readily accessible to scavengers and will be removed from the construction site on a daily basis so as not to attract potential San Bernardino kangaroo rat predators.	2-639	Natural Environment Study, January 2018	Biologist/PCM/Design-Builder	Construction/Design-Build						
ES-14	Spoils and rubble will not be deposited outside the identified limits of disturbance and material waste generated by the project will be disposed of offsite.	2-639	Natural Environment Study, January 2018	Biologist/PCM/Design-Builder	Construction/Design-Build						
Invasive Species											
IS-1	<p>The following avoidance and minimization measures will be implemented:</p> <ul style="list-style-type: none">a. Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. The cleaning of equipment will occur at least 300 feet from ESA fencing.b. Fill material will be obtained from weed-free sources.c. Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.d. Following construction, temporarily-impacted areas adjacent to native vegetation would be revegetated with native plant species approved by the District Biologist.e. Following construction, all revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory.f. Eradication procedures (e.g., spraying and/or hand weeding) will be included in the plan. If invasive plants are established, then the use of herbicides will be prohibited within, and adjacent to, native vegetation except as specifically authorized by the Department Biologist.g. Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth. Vegetation will be covered while being carried on trucks, and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations.	2-642	Natural Environment Study, January 2018	Biologist/PCM/Design-Builder	Construction/Design-Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
Climate Change-Green House Gases (GHG)											
GHG-1	The project will incorporate ITS elements to help manage the efficiency of the highway system. For example, the project will install vehicle detection stations to facilitate dynamic pricing on the Express Lanes to manage traffic so it will not exceed threshold LOS levels. Changeable message signs will improve traveler information so motorists can avoid delays.	3-44	SCAG 2016-2040 PEIR	SBCTA/PCM/Design -Builder	Construction/Design- Build						
GHG-2	The project will incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs—or balls, in the stoplight vernacular. The LED balls themselves consume less electricity than traditional lights, which will also help reduce the project's CO2 emissions.	3-44	SCAG 2016-2040 PEIR	PCM/Design-BUILDER	Construction/Design- Build						
GHG-3	Construction will be staged to minimize associated delays and congestion. When short-term full freeway closure is necessary, it will be scheduled for nighttime to minimize impacts on motorists. Interchange work will be staggered to avoid closing two consecutive interchanges or two consecutive on- or off-ramps at the same time.	3-44	SCAG 2016-2040 PEIR	PCM/Design-BUILDER	Construction/Design- Build						
GHG-4	Revegetate disturbed land	3-44	SCAG 2016-2040 PEIR	PCM/Design-BUILDER	Construction/Design- Build						
GHG-5	Utilize grid-based electricity and/or onsite renewable electricity generator where available and practical rather than diesel and/or gasoline powered generators.	3-44	SCAG 2016-2040 PEIR	PCM/Design-BUILDER	Construction/Design- Build						
GHG-6	Maintain all construction equipment in proper working order, according to manufacturer's specifications. The equipment must be checked by an ASE-certified mechanic and determined to be running in proper condition before it is operated.	3-43	SCAG 2016-2040 PEIR	PCM/Design-BUILDER	Construction/Design- Build						
Section 4(f) Parks and Recreational Resources											
PARK-1	The construction contract will stipulate that no construction related equipment, materials, or personnel be allowed within the Coyote Canyon Park property throughout the period of construction. Existing means of access to the Coyote Canyon Park (via Duncan Canyon Road and Coyote Canyon Road) will be maintained at all times during construction.	Appendix A	Section 4(f) Letter to the City of Fontana, December 4, 2017	PCM/Design-BUILDER	Construction/Design- Build						
PARK-2	Staging and storage of materials shall not occur within 500 feet of the limits of Coyote Canyon Park.	Appendix A	Section 4(f) Letter to the City of Fontana, December 4, 2017	PCM/Design-BUILDER	Construction/Design- Build						
TRAIL-1	In the area of the Etiwanda Overhead, the construction contractor will erect all falsework during nighttime hours. The falsework required to construct the Etiwanda Overhead will not be located within the Pacific Electric Trail paved area.	Appendix A	Section 4(f) Letter to the City of Fontana December 4, 2017	PCM/Design-BUILDER	Construction/Design- Build						
TRAIL-2	At a minimum, access for Pacific Electric Trail users must be maintained daily between 5:00 a.m. and 9:00 p.m. during construction.	Appendix A	Section 4(f) Letter to the City of Fontana December 4, 2017 and Section 4(f) Letter to the City of Rancho Cucamonga, January 22, 2018	PCM/Design-BUILDER	Construction/Design- Build						

Measure #	Avoidance, Minimization, and/or mitigation Measure	Page # in ED	Source	Responsible for Development and/or Implementation	Timing/Phasing	If Applicable, Corresponding Construction Provisions (Standard, SSP, NSSP)	Action(s) taken to Implement/Remarks	Measure Completed		Environmental Compliance	
								Date	Initials	Yes	No
TRAIL-3	The City of Fontana would receive Electric Pacific Tail closure information a minimum of 90 days in advance so that the City would be able to provide 30 days advance notice to residents.	Appendix A	Section 4(f) Letter to the City of Fontana December 4, 2017 and Section 4(f) Letter to the City of Rancho Cucamonga, January 22, 2018	PCM/Design-Builder	Construction/Design-Build						
TRAIL-4	The City of Rancho Cucamonga would receive closure information a minimum of 90 days in advance of the closure so that the City can coordinate with the SBCTA to 1) inform the Trails Advisory Committee of the proposed work, and 2) determine the appropriate alternate reroute/detour information and applicable signs. SBCTA shall provide notice of the closure to all property owners and residents within 660 feet of the limits of the area of work a minimum of 30 days in advance of the closure.	Appendix A	Section 4(f) Letter to the City of Rancho Cucamonga, January 22, 2018	PCM/Design-Builder	Construction/Design-Build						
TRAIL-5	Upon completion of the Etiwanda Overhead improvements and the removal of falsework, any incidental or unanticipated damage or disrepair to the Pacific Electric Trail that may have resulted during construction activities would be restored to preconstruction conditions.	Appendix A	Section 4(f) Letter to the City of Fontana, December 4, 2017 and Section 4(f) Letter to the City of Rancho Cucamonga, January 22, 2018	PCM/Design-Builder	Construction/Design-Build						

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Appendix D. List of Acronyms and Abbreviations

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Appendix D. List of Acronyms and Abbreviations

AB	Assembly Bill	FTIP	Federal Transportation Improvement Program
ADL	Aerially Deposited Lead	GHG	Greenhouse gas
ADT	Average Daily Traffic	GP	General Purpose
APE	Area of Potential Effects	HASR	Historic Architectural Survey Report
ARB	Air Resources Board	HOV	High Occupancy Vehicle
BLM	Bureau of Land Management	HPSR	Historic Property Survey Report
BMP	Best Management Practice	IS	Initial Study
Caltrans	California Department of Transportation	ISA	Initial Site Assessment
CCAA	California Clean Air Act	LEDPA	Least environmentally damaging practicable alternative
CDFW	California Department of Fish and Wildlife	LOS	Level of Service
CEQ	Council on Environmental Quality	MBTA	Migratory Bird Treaty Act
CEQA	California Environmental Quality Act	MND	Mitigated Negative Declaration
CFR	Code of Federal Regulations	MOU	Memorandum of Understanding
CMS	changeable message signs	mph	Miles per hour
CO	Carbon monoxide	MSAT	Mobile Source Air Toxic
CTC	California Transportation Commission	MSHCP	Riverside County Multiple Species Habitat Conservation Plan
CWA	Clean Water Act	MS4s	Municipal separate storm sewer systems
dB	Decibel	NAAQS	National Ambient Air Quality Standards
DLNR	California Department of Land and Natural Resources	NB	Northbound
EA	Environmental Assessment	NEPA	National Environmental Policy Act
EB	eastbound	NES	Natural Environmental Study
EJ	Environmental Justice	ND	Negative Declaration
EO	Executive Order	NHPA	National Historic Preservation Act
FCAA	Federal Clean Air Act	NMFS	National Marine Fisheries Service
FEMA	Federal Emergency Management Agency	NO ₂	Nitrogen dioxide
FHWA	Federal Highway Administration		
FONSI	Finding of No Significant Impact		
ft	Feet		

NPDES	National Pollutant Discharge Elimination System	SR	State Route
NPS	National Park Service	SSP	Standard Special Provision
NRHP	National Register of Historic Places	SWMP	Storm Water Management Plan
NSR	Noise Study Report	SWPPP	Storm Water Pollution Prevention Plan
O ₃	Ozone	SWRCB	State Water Resources Control Board
PA	Programmatic Agreement	T&E	Threatened and Endangered
PA/ED	Project Approval and Environmental Document	TCE	Temporary Construction Easement
PDT	Project Development Team	TIP	Transportation Improvement Program
PM ₁₀	particles of 10 micrometers or smaller	TDM	Transportation Demand Management
PM _{2.5}	particles of 2.5 micrometers or smaller	TMP	Transportation Management Plan
PRC	Public Resource Code	TSM	Transportation System Management
PSR	Project Study Report	U.S.	United States
RCTC	Riverside County Transportation Commission	U.S. EPA	U.S. Environmental Protection Agency
Riv	Riverside County	USACE	U.S. Army Corps of Engineers
RSA	Resource Study Area	USC	United States Code
RSL	Regional Screening Level	USDOT	U.S. Department of Transportation
RTP	Regional Transportation Plan	USFWS	U.S. Fish and Wildlife Service
RWQCB	Regional Water Quality Control Board	VDS	vehicle detection system
SB	southbound	VIA	Visual Impact Assessment
SBd	San Bernardino County	VHT	Vehicle hours of travel
SBCTA	San Bernardino County Transportation Authority	VMT	Vehicle miles traveled
SCAG	Southern California Association of Governments	VPH	Vehicles per hour
SCAQMD	South Coast Air Quality Management District	VVTA	Victor Valley Transit Authority
SCE	Southern California Edison	WB	westbound
SCS	Sustainable Communities Strategy		
SER	Standard Environmental Reference		
SHPO	State Historic Preservation Officer		
SO ₂	Sulfur dioxide		

Appendix E. List of Technical Studies

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Appendix E. List of Technical Studies

Following is a list of technical studies prepared for the I-15 CP and used in the preparation of the environmental document:

Community Impact Assessment, October 2017

Traffic Study Report, March 2017

Preliminary Drainage Study Report, July 2016

District Preliminary Geotechnical Report, May 2017

Noise Study Report, July 2017

Noise Study Report Addendum, August 2018

Noise Abatement Decision Report, July 2017

Noise Abatement Decision Report Addendum, August 2018

Air Quality Report, December 2017

Initial Site Assessment, June 2016

Site Investigation and Aerially Deposited Lead Survey, June 2017

Hazardous Materials Survey Report, April 2017

Scoping Questionnaire for Water Quality Issues, September 2017

Location Hydraulic Study, July 2016

Combined Paleontological Identification Report/Paleontological Evaluation Report, February 2017

Visual Impact Assessment, May 2017

Historic Property Survey Report, June 2017

Archeological Survey Report, June 2017

Wetland Delineation Report, June 2017

Natural Environment Study Report, January 2018

Cumulative Impact Report, January 2018

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Appendix F. FHWA Project Level Air Quality Conformity Determination Letters

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Appendix F. FHWA Project Level Air Quality Conformity Determination Letters



U.S. Department
of Transportation
**Federal Highway
Administration**

**Federal Highway Administration
California Division**

August 7, 2018

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

In Reply Refer To:
HDA-CA

John Bulinski
California Department of Transportation District 8
464 W. 4th Street
San Bernardino, CA 92401

Attention: Paul Phan

Dear Mr. Bulinski

SUBJECT: Project Level Conformity Determination for the I-15 Corridor Project (RTIP ID: 20159901)

On July 3, 2018, 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-15 Corridor Project. The project is in an area that is designated Non-Attainment or Maintenance for Nitrogen Dioxide (NO₂) Carbon Monoxide (CO), Ozone and Particulate Matter (PM₁₀, PM_{2.5}).

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 Southern California Association of Governments' (SCAG) 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.

As required by 40 CFR 93.116 and 93.123, the localized PM_{2.5} and PM₁₀ analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the I-15 Corridor 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.

Sincerely

Shawn Oliver
Environmental Team Leader

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STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ENGINEERING
464 WEST 4th STREET, MS-24
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4307
TTY (909) 383-6300



*Serious drought.
Help save water!*

July 02, 2018

EA 08-0R800

Mr. Jack Lord
U.S. Department of Transportation
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Attention: Joseph Vaughn

RE: PROJECT-LEVEL CONFORMITY DETERMINATION FOR INTERSTAE 15 CORRIDOR
PROJECT IN RIVERSIDE AND SAN BERNARDINO COUNTIES CALIFORNIA

Dear Mr. Lord:

The California Department of Transportation (Caltrans) requests that the Federal Highway Administration (FHWA) issue a project-level conformity determination for the Interstate 15 (I-15) Corridor Project in the Riverside and San Bernardino Counties with Project EA 0R800.

The project would add two Express Lanes in each direction of I-15 corridor from the Riverside /San Bernardino (RIV/SB) between SR-60 and SR-210 and one Express Lane in each direction between SR-210 and Duncan Canyon Road. The project limits in Riverside County is PM 49.8/52.3 and San Bernardino County PM 0.0/ 12.2

The Project is in an area that is designated Nonattainment or Maintenance for ozone, carbon monoxide, particulate matter with aerodynamic diameter less than or equal to 10 micro (PM₁₀), particulate matter with aerodynamic diameter less than or equal to 2.5 micro (PM_{2.5}), and nitrogen dioxide (NO₂). Details of the analysis are contained in the enclosed Air Quality Conformity Analysis (AQCA) report and related materials.

The project area is subject to regional conformity analysis requirements. The attached conformity analysis demonstrates that the project is listed in the conforming Regional Transportation Plan and Transportation Improvement Program, and therefore that it meets regional conformity requirements for a project-level conformity determination.

The project area is subject to project-level hot-spot analysis requirements for CO, PM₁₀, and PM_{2.5}. The project is located in the South Coast Air Basin (SCAB) that is non-attainment for Ozone and Particulate Matter 2.5 and maintenance for PM₁₀, and CO. The attached conformity analysis shows that hot-spot analysis requirements listed in 40 CFR §93.116 and 123 are met. A written

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system to enhance California's economy and livability"*

Mr. Jack Lord
July 02, 2018, Page 2

commitment is made by this letter to implement hot-spot pollutant control measure identified in the applicable SIP and NEPA document, as required by 40 CFR 93.117 and 125.

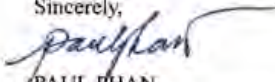
Interagency Consultation and public involvement requirements related to PM₁₀ and PM_{2.5} have been completed in accordance with the *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas* (U.S. EPA, November 2013 and updated in November in 2015). The Project completed interagency coordination via Southern California Association of Government (SCAG) Transportation Conformity Working Group (TCWG) at a meeting on May 24, 2016. At the meeting the TCWG identified that the proposed project is not a Project of Air Quality Concern (POAQC). The United States Environmental Protection Agency, Caltrans and the Federal Highway Administration concurrence in this regard was received on August 4, 2016, via email after July 26, 2018 meeting. The Interagency Consultation partners concurred, as shown in the attached materials, that the project is not exempt from conformity analysis requirements, but that it is not a Project of Air Quality Concern for PM₁₀ and PM_{2.5} as defined at 40 CFR 93.123(b)(1). As such, an explicit, detailed PM₁₀ and PM_{2.5} hot-spot analysis is not required.

Public involvement included advertising the availability of the conformity analysis. The public review period lasted for 30 days beginning on February 15, 2018 until March 15, 2018. No public comments individuals or from private organizations were received. No review comments were received from US-EPA or from other resource agencies as discussed in Appendix B

This project has been assigned to the Department under 23 USC 327 (NEPA Assignment) and the proposed approval date of the final Initial Study(MND)/Environmental Assessment (IS/EA) document is expected on or about end of July 2018. We would appreciate your assistance with providing a conformity determination by July 30, 2018, or earlier.

If you have any questions regarding this conformity analysis, please contact Paul Phan at 909-383-4307 or Paul_Phan@dot.ca.gov or Edison Jaffery @dot.ca.gov

Sincerely,



PAUL PHAN
Office Chief Environmental Engineering

Cc: Edison Jaffery, Environmental Engineering

Ronn Knox, Generalist Environmental Planning

Enclosures

- (1) Hard copy of Air Quality Conformity Analysis with CD.
- (2) Air Quality Conformity Findings Checklist included in the hard copy

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."

Appendix G. Preliminary and Approved Jurisdictional Delineations

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DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS

July 25, 2018

SUBJECT: Approved Jurisdictional Determination

Craig Wentworth, Senior Environmental Planner and Biologist
California Department of Transportation
District 8, 464 West 4th Street, MS-822 6th Floor
San Bernardino, CA 92401-1400

Dear Mr. Wentworth:

I am responding to your request (File No. SPL-2017-00521-LOB) dated August 1, 2017, for an approved Department of the Army jurisdictional determination (JD) for the Interstate 15 Express Lanes Riverside County and San Bernardino County Project site (Lat. 34.093169, Long. -117.543021) located within the Cities of Eastville, Jurupa Valley, Ontario, Rancho Cucamonga, and Fontana, Riverside and San Bernardino County, California.

The Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. If both tests are met, a permit would likely be required. The first test determines whether or not the proposed project is located within the Corps' geographic jurisdiction (i.e., it is within a water of the United States). The second test determines whether or not the proposed project is a regulated activity under Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act. This evaluation pertains only to geographic jurisdiction.

Based on available information, I have determined waters of the United States do not occur on the project site at Features 1-6, 1-8, 1-10, 1-11, 1-12, 1-18, -1-19, 1-20, 1-22, 1-23, 1-31, 1-32, 1-33, 1-36, 1-37, 1-42, 1-43, 1-44, 1-47, 1-48 B, 1-49, 1-50, 1-51, 1-53, 1-54, 1-55, 1-56, 1-57, 1-60, 1-61, 1-62, 1-63, 1-64, 1-65, 1-66, 1-67, 1-68, 1-69, 1-70, 1-71, 1-73, 1-76, 1-77, 1-78, 1-79, 1-80, 1-81, 2013-1, 2013-3, 2013-5, 2013-6, 2013-7, 2013-11, 2013-132, 2013-137, 2013-138, 2013-139, 2013-141, 2013-142, 2013-143, 2013-144, 2013-145, 2013-150, 2013-164, 2013-190. The basis for our determination can be found in the enclosed Approved Jurisdictional Determination (JD) form.

This letter includes an approved jurisdictional determination for the Interstate 10 Corridor Project Approved Jurisdictional Determination project site. If you wish to submit new information regarding this jurisdictional determination, please do so within 60 days. We will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. If you object to this or any revised or reissued jurisdictional determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you wish to appeal this

decision, you must submit a completed RFA form within 60 days of the date on the NAP to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division, CESPDPDS-O, 2042B
1455 Market Street
San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5 (see below), and that it has been received by the Division Office by **September 21, 2018**.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request at Features 1-6, 1-8, 1-10, 1-11, 1-12, 1-18, 1-19, 1-20, 1-22, 1-31, 1-32, 1-33, 1-36, 1-37, 1-42, 1-43, 1-44, 1-47, 1-48, 1-49, 1-50, 1-53, 1-54, 1-55, 1-56, 1-57, 1-60, 1-61, 1-62, 1-63, 1-64, 1-65, 1-66, 1-67, 1-68, 1-69, 1-70, 1-71, 1-73, 1-76, 1-77, 1-78, 1-79, 1-80, 1-81, 2013-1, 2013-3, 2013-5, 2013-6, 2013-7, 2013-11, 2013-132, 2013-137, 2013-138, 2013-139, 2013-141, 2013-142, 2013-143, 2013-144, 2013-145, 2013-150, 2013-164, 2013-190 , and is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

Thank you for participating in the regulatory program. If you have any questions, please contact Luis Betancourt at (213) 452-3845 or via e-mail at Luis.O.Betancourt@usace.army.mil. Please help me to evaluate and improve the regulatory experience for others by completing the customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,

ALLEN.AARON.
O.1232270795

Digitally signed by
ALLEN.AARON.O.1232270795
DN: c=US, o=U.S. Government,
ou=DoD, ou=PKI, ou=USA,
cn=ALLEN.AARON.O.1232270795
Date: 2018.07.25 11:53:09 -0700

Aaron O. Allen, Ph.D.
Chief, North Coast Branch
Regulatory Division

Enclosure(s)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: San Bernardino County Transportation Authority, Attn: Mr. Craig Wentworth	File No.: SPL-2017-00521-LOB	Date: July 25, 2018
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Luis. O Betancourt
Project Manager
Orange and Riverside Counties Section
South Coast Branch
U.S. Army Corps of Engineers
Phone: (213) 452-3845, FAX 916-557-7803
Email: Luis.O.Betancourt@usace.army.mil

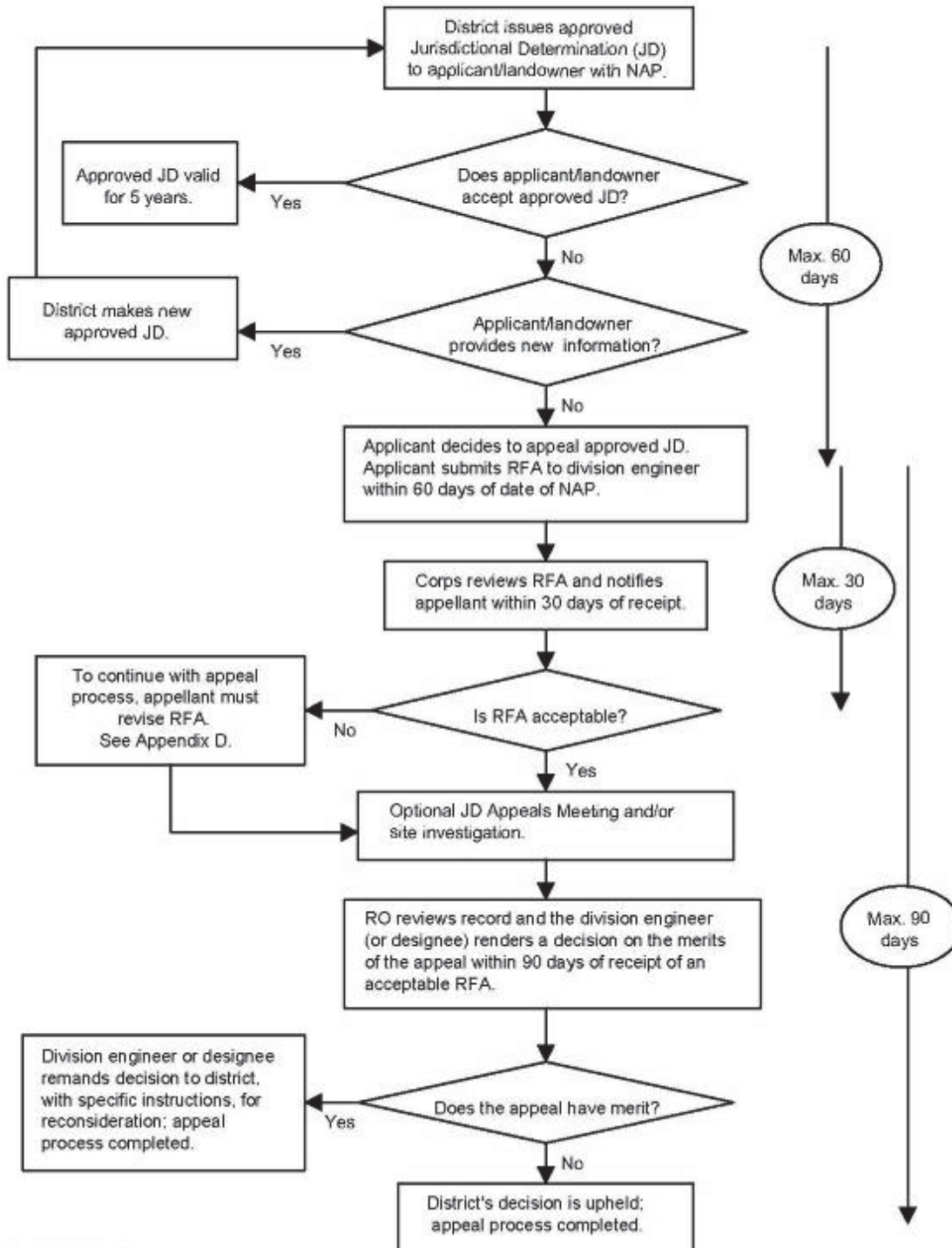
If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<hr/> Signature of appellant or agent.	Date:	Telephone number:
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Administrative Appeal Process for Approved Jurisdictional Determinations



§ 331.5 Criteria.

(a) *Criteria for appeal* —(1) *Submission of RFA*. The appellant must submit a completed RFA (as defined at §331.2) to the appropriate division office in order to appeal an approved JD, a permit denial, or a declined permit. An individual permit that has been signed by the applicant, and subsequently unilaterally modified by the district engineer pursuant to 33 CFR 325.7, may be appealed under this process, provided that the applicant has not started work in waters of the United States authorized by the permit. The RFA must be received by the division engineer within 60 days of the date of the NAP.

(2) *Reasons for appeal*. The reason(s) for requesting an appeal of an approved JD, a permit denial, or a declined permit must be specifically stated in the RFA and must be more than a simple request for appeal because the affected party did not like the approved JD, permit decision, or the permit conditions. Examples of reasons for appeals include, but are not limited to, the following: A procedural error; an incorrect application of law, regulation or officially promulgated policy; omission of material fact; incorrect application of the current regulatory criteria and associated guidance for identifying and delineating wetlands; incorrect application of the Section 404(b)(1) Guidelines (see 40 CFR Part 230); or use of incorrect data. The reasons for appealing a permit denial or a declined permit may include jurisdiction issues, whether or not a previous approved JD was appealed.

(b) *Actions not appealable*. An action or decision is not subject to an administrative appeal under this part if it falls into one or more of the following categories:

(1) An individual permit decision (including a letter of permission or a standard permit with special conditions), where the permit has been accepted and signed by the permittee. By signing the permit, the applicant waives all rights to appeal the terms and conditions of the permit, unless the authorized work has not started in waters of the United States and that issued permit is subsequently modified by the district engineer pursuant to 33 CFR 325.7;

(2) Any site-specific matter that has been the subject of a final decision of the Federal courts;

(3) A final Corps decision that has resulted from additional analysis and evaluation, as directed by a final Appeal decision;

(4) A permit denial without prejudice or a declined permit, where the controlling factor cannot be changed by the Corps decision maker (e.g., the requirements of a binding statute, regulation, state Section 401 water quality certification, state coastal zone management disapproval, etc. (See 33 CFR 320.4(j)));

(5) A permit denial case where the applicant has subsequently modified the proposed project, because this would constitute an amended application that would require a new public interest review, rather than an appeal of the existing record and decision;

(6) Any request for the appeal of an approved JD, a denied permit, or a declined permit where the RFA has not been received by the division engineer within 60 days of the date of the NAP;

(7) A previously approved JD that has been superseded by another approved JD based on new FA information or data submitted by the applicant. The new approved JD is an appealable action;

(8) An approved JD associated with an individual permit where the permit has been accepted and signed by the permittee;

(9) A preliminary JD; or

(10) A JD associated with unauthorized activities except as provided in §331.11.

Feature	County	Latitude	Longitude	Amount	Hydrologic Regime	Likely Jurisdictional Status	Cowardin Class	Section 10 Water	Approximate Distance to RPW	Flow Route to RPW	Primary Substrate	Hydrologic Indicators	Biological Characteristics
1-6	CALIFORNIA	34.14869643	-117.4817932	411	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Sheetflow from roadway	Sparse weeds and grasses, mostly devoid of vegetation
1-8	CALIFORNIA	34.15225676	-117.4758779	253	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete channel with water staining	No vegetation present
1-10	CALIFORNIA	34.13531594	-117.4980296	210	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen detention basin, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-11	CALIFORNIA	34.11626167	-117.5208903	234	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete channel with sediment	Dense grasses and weeds surrounding the channel
1-12	CALIFORNIA	34.11480545	-117.522712	276	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete channel with sediment	Dense grasses and weeds surrounding the channel
1-18	CALIFORNIA	34.10488405	-117.5324425	491	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Concrete channel with water staining	Dense grasses and weeds
1-19	CALIFORNIA	34.01134451	-117.5509844	15	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete v-ditch, no water present	Dense grasses and weeds surrounding ditch
1-20	CALIFORNIA	34.01029898	-117.5507888	438	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete v-ditch, water present	Sparse grasses surrounding the ditch
1-22	CALIFORNIA	34.09955098	-117.5391338	280	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete v-ditch, water staining	Sparse grasses surrounding the ditch, mostly devoid of vegetation
1-23	CALIFORNIA	34.10744534	-117.5321963	1090	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen-lined ditch with no water present	Sparse grasses surrounding the ditch, mostly devoid of vegetation
1-31	CALIFORNIA	34.03318979	-117.5507873	25	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch with no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-32	CALIFORNIA	34.07764249	-117.5459542	185	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, some water present	Sparse weeds and grasses, mostly devoid of vegetation

1-33	CALIFORNIA	34.0780007	-117.5457498	415	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-36	CALIFORNIA	34.08144761	-117.5454299	1176	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete channel with water staining	Dense grasses and weeds surrounding ditch
1-37	CALIFORNIA	34.08290841	-117.5451886	55	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch originating from overside drain, no water present	Sparse grasses surrounding the ditch, mostly devoid of vegetation
1-42	CALIFORNIA	34.12555302	-117.5098401	1267	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch giving way to concrete-lined trapezoidal channel, no water present.	Sparse weeds and grasses, mostly devoid of vegetation
1-43	CALIFORNIA	34.12471461	-117.5111239	157	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Dry earthen ditch	No vegetation present
1-44	CALIFORNIA	34.12461256	-117.5112563	87	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Dry earthen ditch	No vegetation present
1-47	CALIFORNIA	34.12839052	-117.5046802	216	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch with water staining	No vegetation present
1-48 B	CALIFORNIA	34.08238116	-117.5443766	43	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen		
1-49	CALIFORNIA	34.03303833	-117.5497985	53	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete v-ditch from overside drain, no water present	No vegetation present
1-50	CALIFORNIA	34.04729231	-117.5506792	317	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	No vegetation present
1-51	CALIFORNIA	34.03593886	-117.5497676	27	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete ditch, no water present	Sparse grass, mostly devoid of vegetation
1-53	CALIFORNIA	34.04300021	-117.5498811	32	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen down drain, no water present	No vegetation present
1-54	CALIFORNIA	34.04612136	-117.5497859	112	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drain, no water present	No vegetation present
1-55	CALIFORNIA	34.05525163	-117.5463702	38	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen overside drain, no water present	Sparse grasses, mostly devoid of vegetation

1-56	CALIFORNIA	34.06662594	-117.5442343	436	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen bioswale, no water present	Sparse grasses, some bushes present
1-57	CALIFORNIA	34.06854302	-117.544274	699	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen bioswale, no water present	Sparse grasses
1-60	CALIFORNIA	34.06843965	-117.545628	808	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen bioswale, no water present	Sparse grasses
1-61	CALIFORNIA	34.06656142	-117.5454543	47	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse grasses
1-62	CALIFORNIA	34.06642324	-117.5455885	408	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen bioswale, no water present	Sparse grasses
1-63	CALIFORNIA	34.04994883	-117.5485853	192	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse bushes and grasses
1-64	CALIFORNIA	34.0936224	-117.542929	40	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen and rock rip rap drainage, no water present	Dense vegetation of grasses and weeds
1-65	CALIFORNIA	34.09426998	-117.5426653	45	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drainage, no water present	Dense vegetation of grasses and weeds
1-66	CALIFORNIA	34.09502355	-117.5423186	45	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drainage, no water present	Dense vegetation of grasses and weeds
1-67	CALIFORNIA	34.09578401	-117.5419356	45	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drainage, no water present	Dense vegetation of grasses and weeds
1-68	CALIFORNIA	34.09643833	-117.5415893	30	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drainage, no water present	Dense vegetation of grasses and weeds
1-69	CALIFORNIA	34.09808324	-117.5404567	20	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen drainage, no water present	Dense vegetation of grasses and weeds
1-70	CALIFORNIA	34.16635419	-117.4606212	466	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-71	CALIFORNIA	34.16581362	-117.4598588	309	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-73	CALIFORNIA	34.16187429	-117.4643805	1570	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-76	CALIFORNIA	34.15439602	-117.474814	1800	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Dense vegetation of grasses, weeds, and bushes

1-77	CALIFORNIA	34.10664806	-117.5309899	49	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Drain pipe receiving sheet flow, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-78	CALIFORNIA	34.07659776	-117.5443775	58	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Erosion feature caused by a break in the corrugated pipe buried within the embankment intended to conduct water from the freeway down a concrete v ditch at the base of the embankment, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-79	CALIFORNIA	34.07171682	-117.5442449	33	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Erosion feature caused by a break in the corrugated pipe buried within the embankment intended to conduct water from the freeway down a concrete v ditch at the base of the embankment, no water present	Sparse weeds and grasses, mostly devoid of vegetation
1-80	CALIFORNIA	34.03516772	-117.5498057	47	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Shallow erosional feature, no water present	Dense weeds and grasses
1-81	CALIFORNIA	34.14875534	-117.4822189	64	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen and Concrete	Earthen and concrete trapezoidal drainage	Dense shrubs and grasses
2013-1	CALIFORNIA	34.00395106	-117.550992	2	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Dense weeds and grasses
2013-3	CALIFORNIA	34.00395477	-117.5506945	390	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-5	CALIFORNIA	34.00277394	-117.5509571	8	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-6	CALIFORNIA	34.00222505	-117.5508292	110	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	No vegetation present
2013-7	CALIFORNIA	34.00192638	-117.5508006	62	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	No vegetation present
2013-11	CALIFORNIA	33.98678699	-117.5496246	1413	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Concrete	Concrete-lined v-ditch, no water present	No vegetation present
2013-132	CALIFORNIA	34.00189886	-117.5494563	121	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen-bottom detention basin, no water present	No vegetation present

2013-137	CALIFORNIA	34.00313957	-117.5494113	38	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen-bottom detention basin, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-138	CALIFORNIA	34.00390899	-117.5499357	33	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Asphalt and Concrete	Asphalt concrete-lined overside drain, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-139	CALIFORNIA	34.0012319	-117.5492358	144	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen and Asphalt	Ditch; upper portion is asphalt, lower portion is earthen, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-141	CALIFORNIA	34.00265157	-117.5497814	67	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	No vegetation present
2013-142	CALIFORNIA	34.00179076	-117.5496974	15	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Asphalt	Asphalt ditch, no water present	Sparse grasses, mostly devoid of vegetation
2013-143	CALIFORNIA	34.02040217	-117.5508138	186	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds, shrubs, and grasses; mostly devoid of vegetation
2013-144	CALIFORNIA	34.02128321	-117.5508943	64	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds, shrubs, and grasses; mostly devoid of vegetation
2013-145	CALIFORNIA	34.02154084	-117.5507726	53	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Asphalt	Asphalt concrete-lined overside drain, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-150	CALIFORNIA	34.01949549	-117.550847	22	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-164	CALIFORNIA	34.02307384	-117.5496849	208	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen	Earthen ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation
2013-190	CALIFORNIA	33.989522	-117.549801	1322	Ephemeral	Non-Jurisdictional	Riverine	No	Less than 1 mile	Natural Drainage Above Ground	Earthen and Asphalt	Earthen and asphalt ditch, no water present	Sparse weeds and grasses, mostly devoid of vegetation

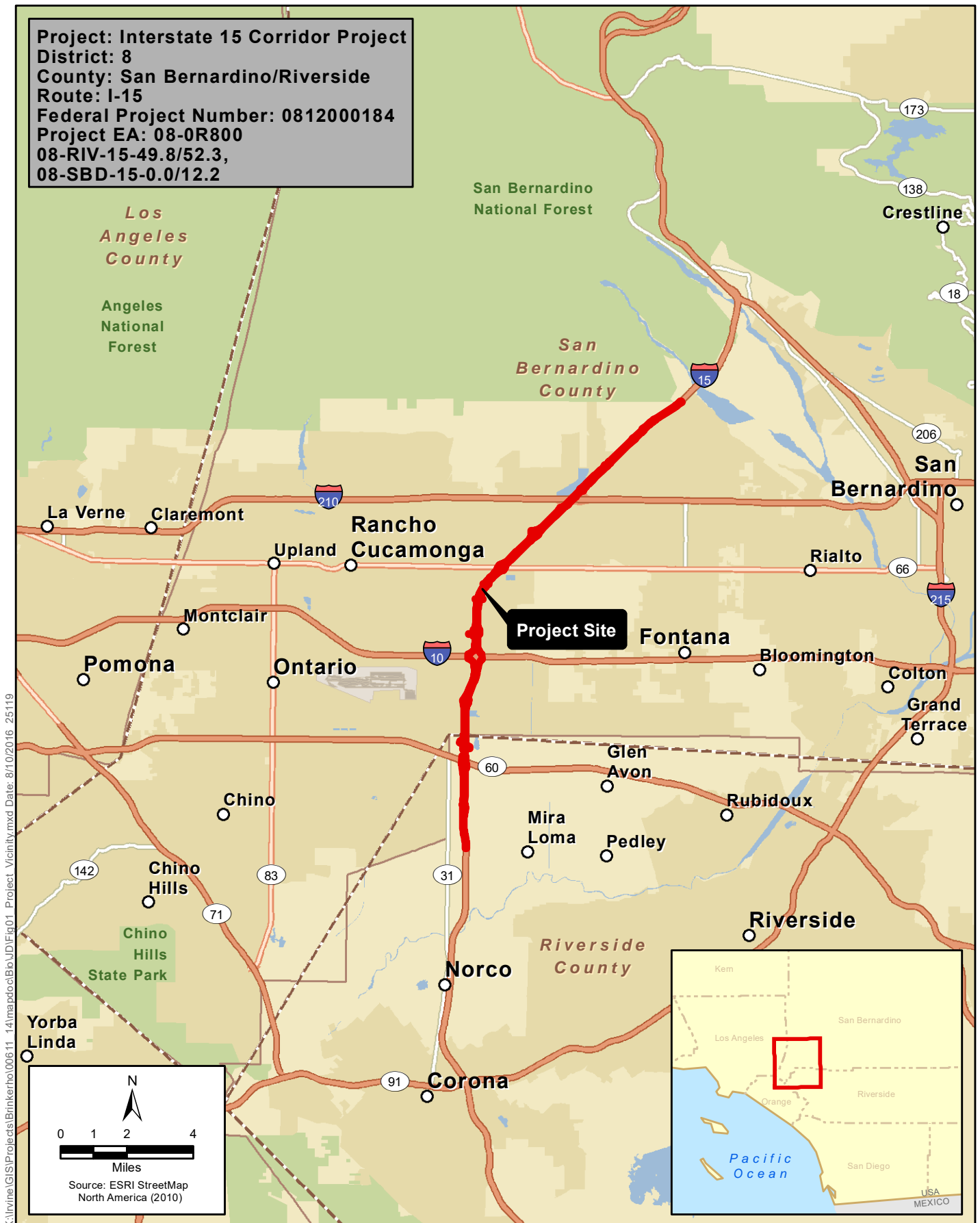


Figure 1
Project Vicinity Map
Interstate 15 Corridor Project

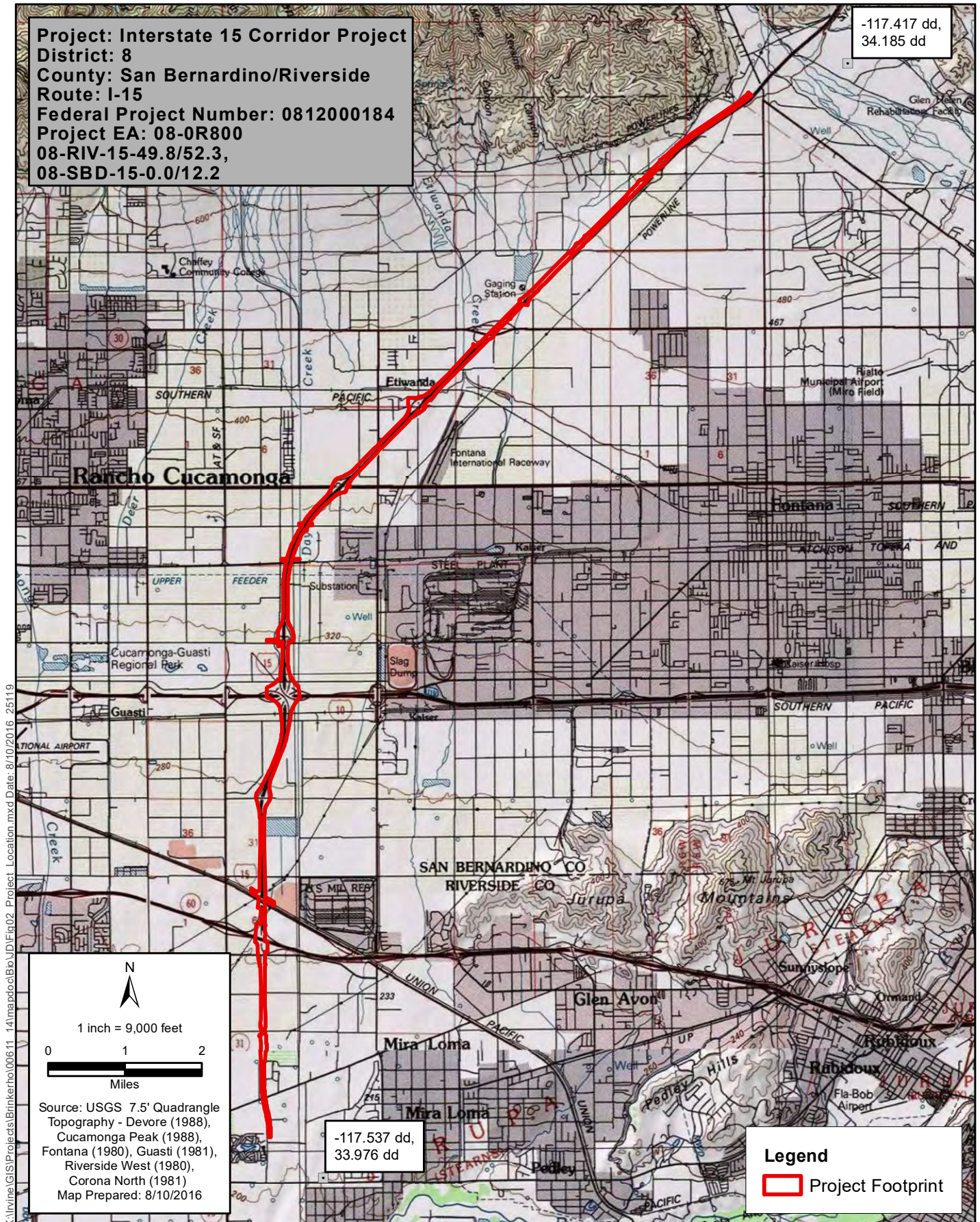


Figure 2
Project Location Map
Interstate 15 Corridor Project



Figure 3
National Hydrography Dataset Map
Interstate 15 Corridor Project

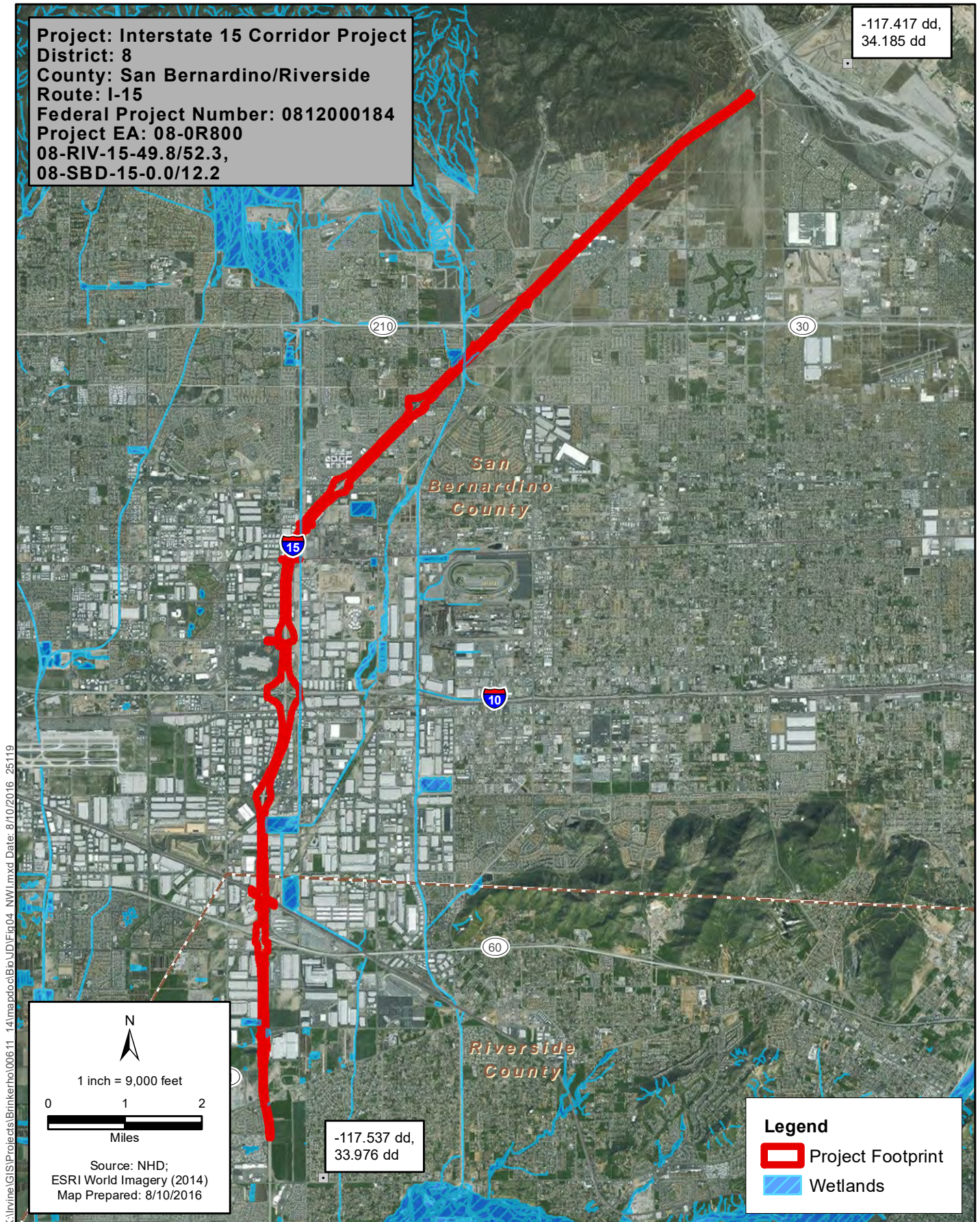


Figure 4
National Wetlands Inventory Map
Interstate 15 Corridor Project

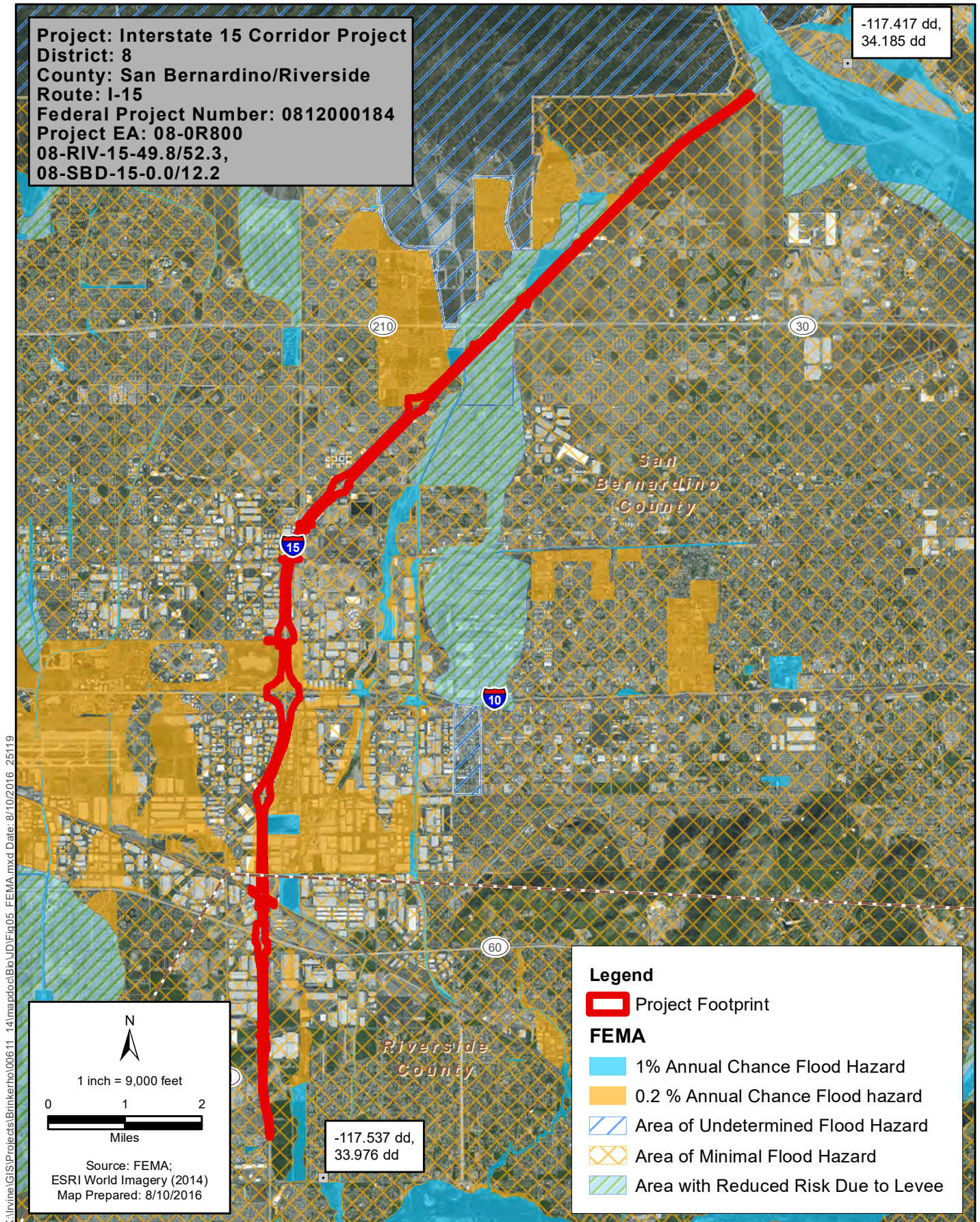


Figure 5
FEMA 100 - year Floodplain Map
Interstate 15 Corridor Project

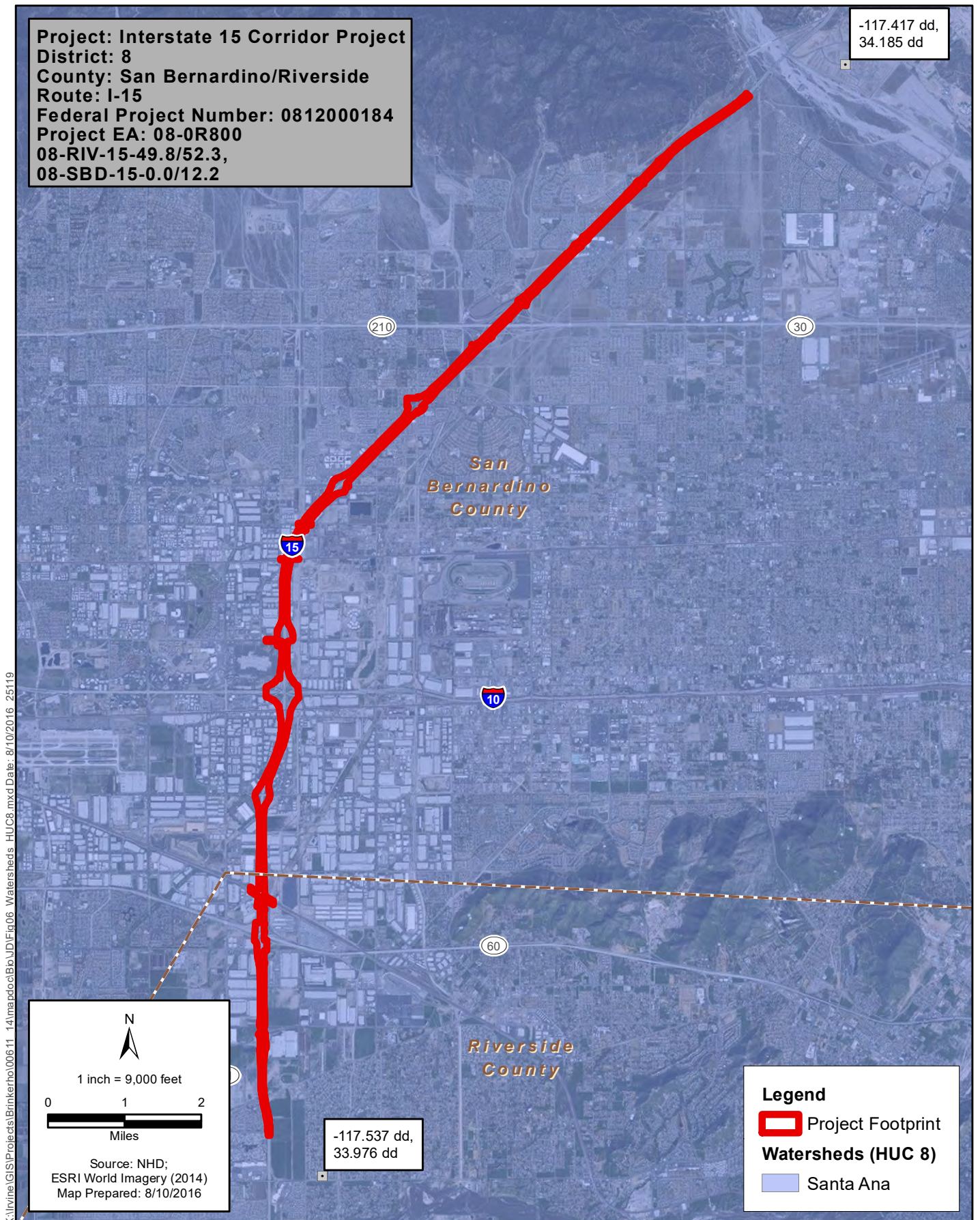


Figure 6
Watershed - HUC 8
Interstate 15 Corridor Project

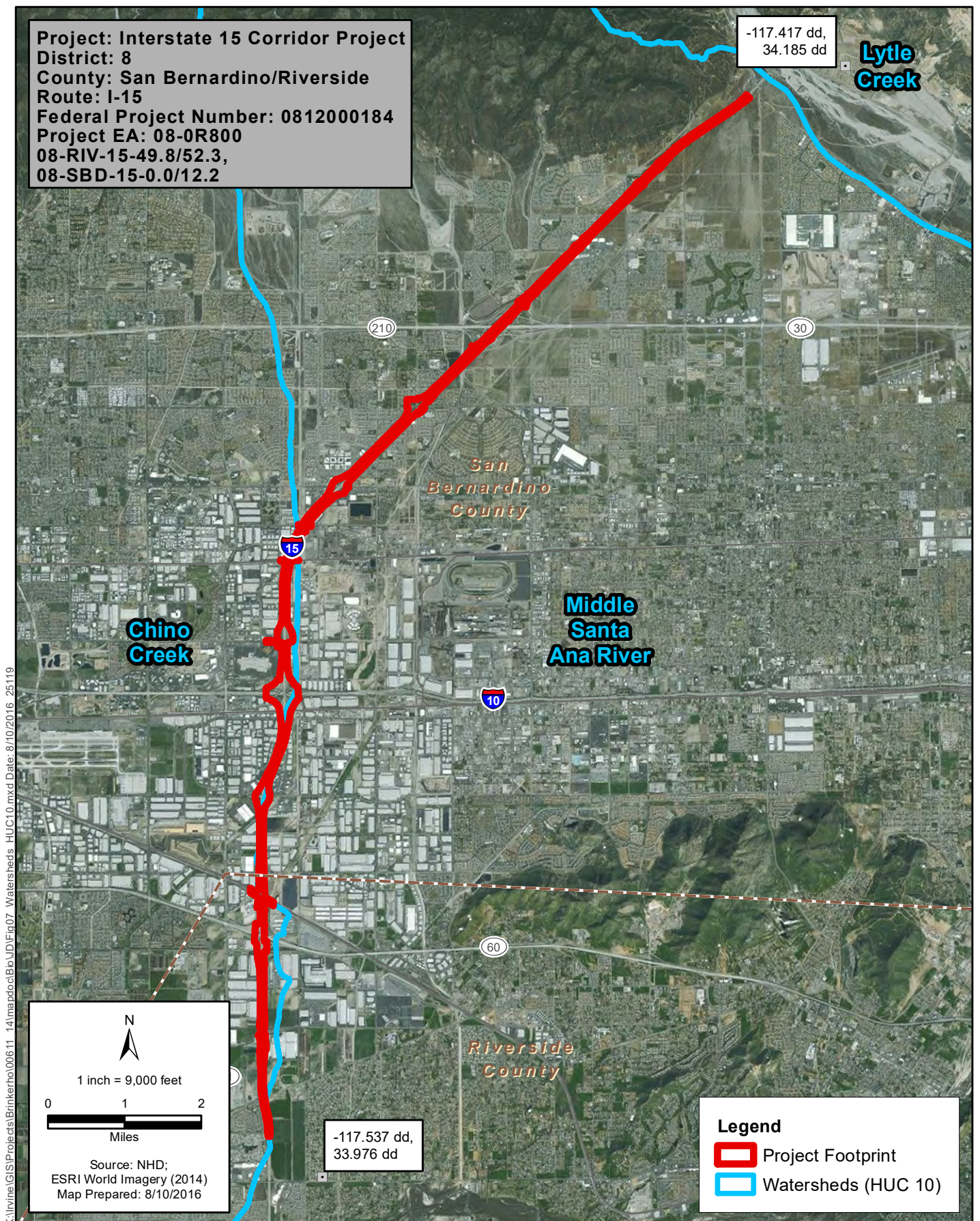
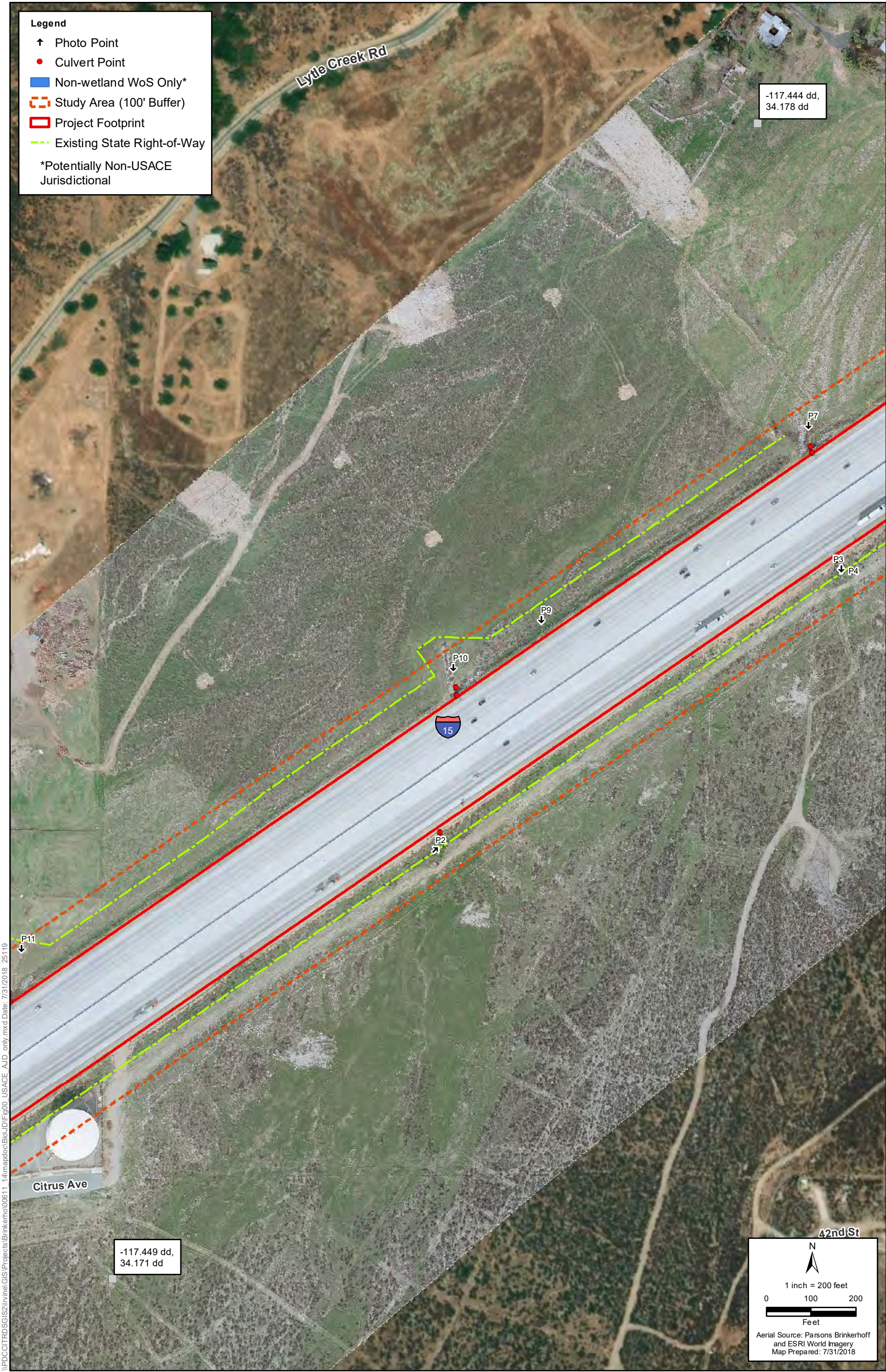


Figure 7
Watershed - HUC 10
Interstate 15 Corridor Project

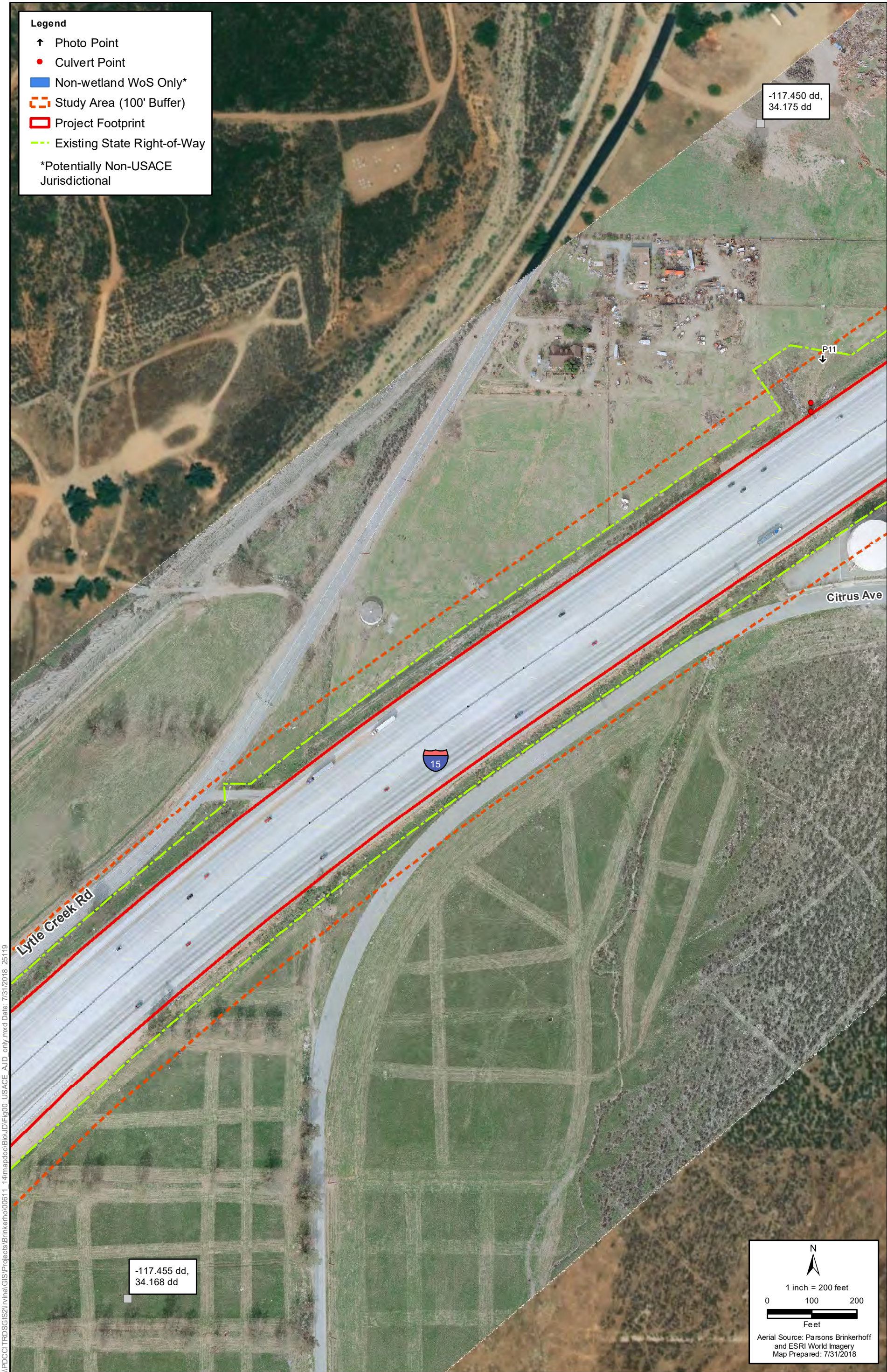


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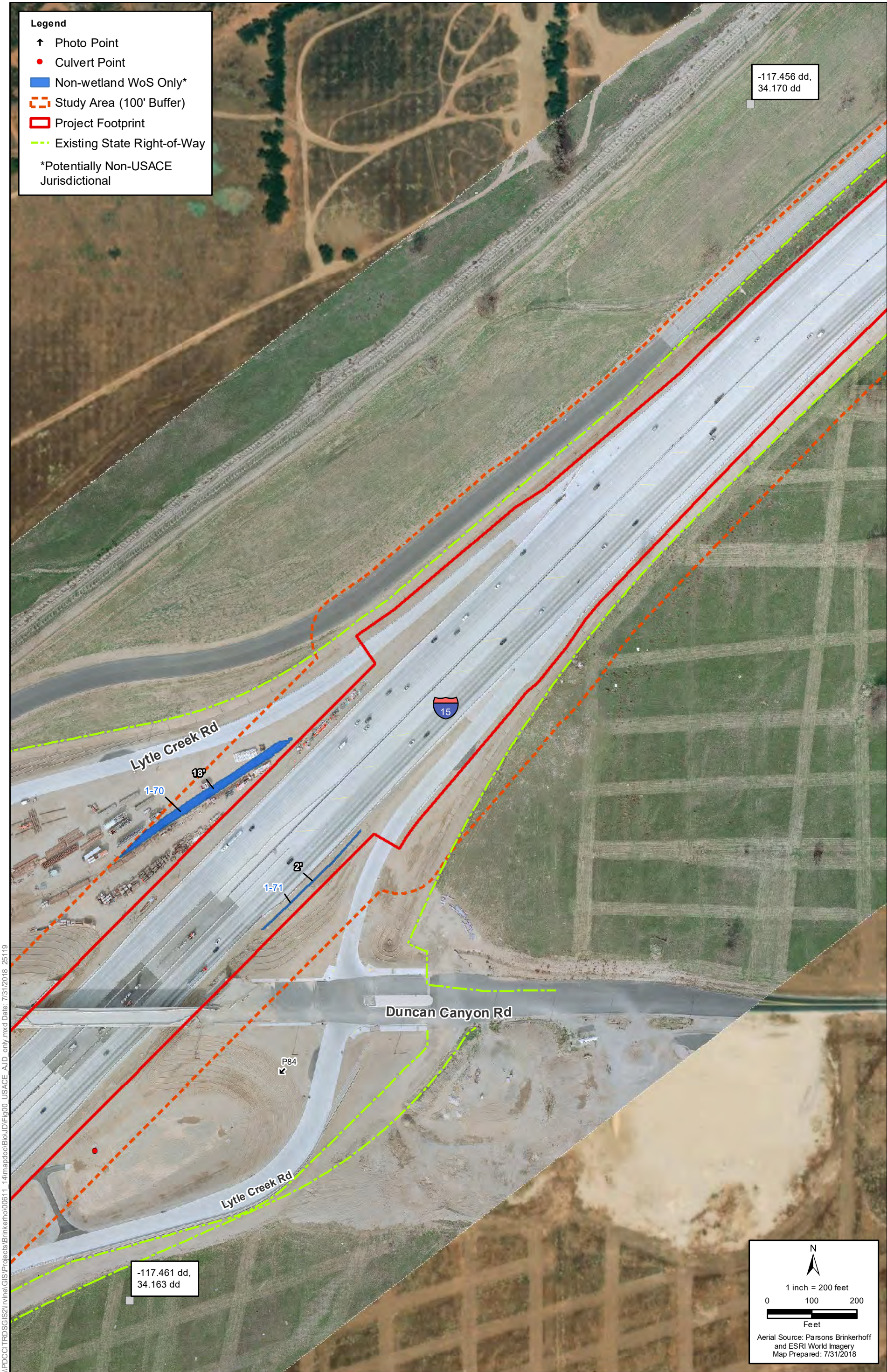
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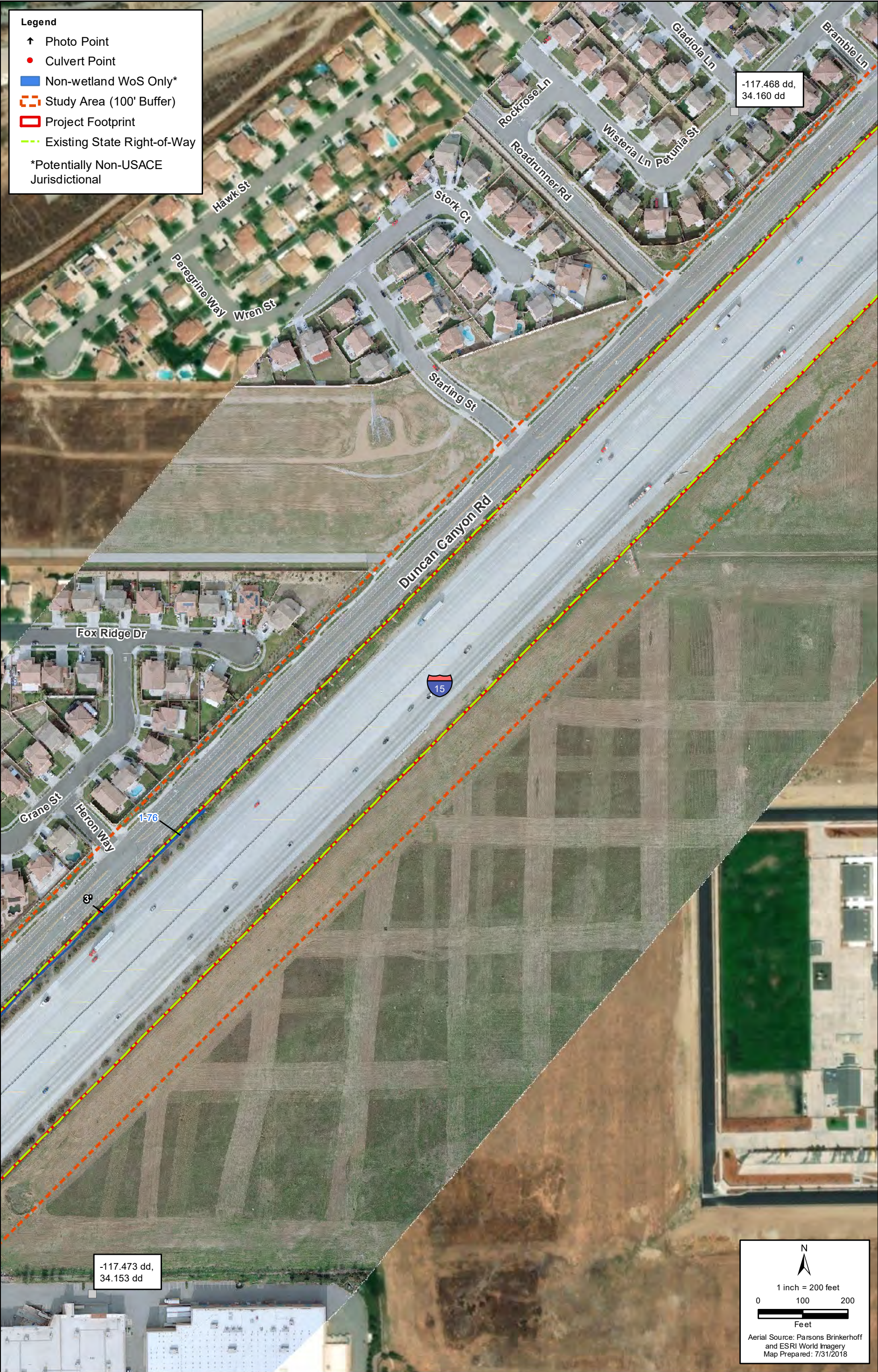


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Legend

- ↑ Photo Point
- Culvert Point
- Non-wetland WoS Only*
- ▭ Study Area (100' Buffer)
- ▭ Project Footprint
- Existing State Right-of-Way

*Potentially Non-USACE Jurisdictional

N

1 inch = 200 feet

0 100 200

Feet

Aerial Source: Parsons Brinkerhoff and ESRI World Imagery
Map Prepared: 7/31/2018

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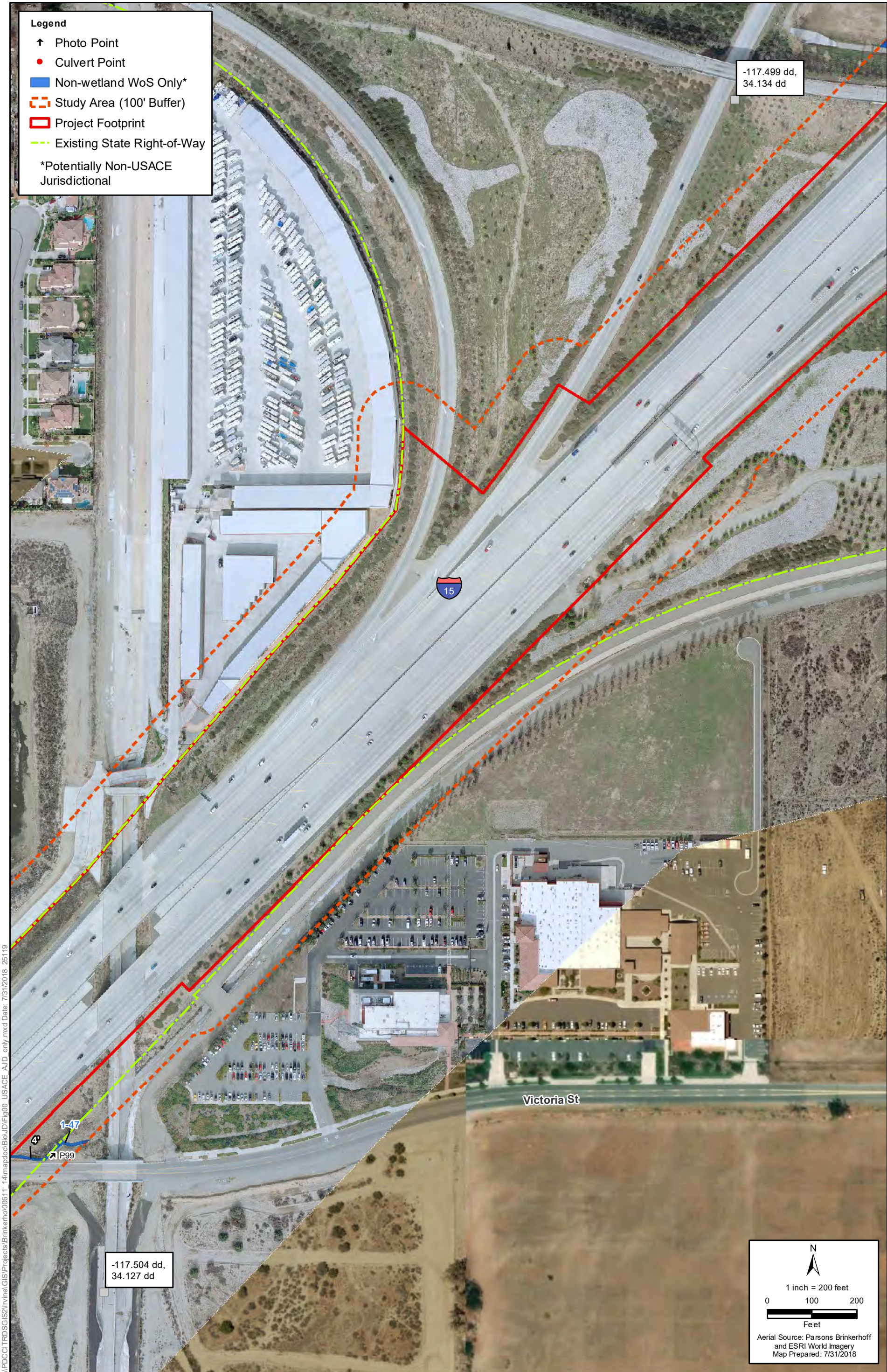
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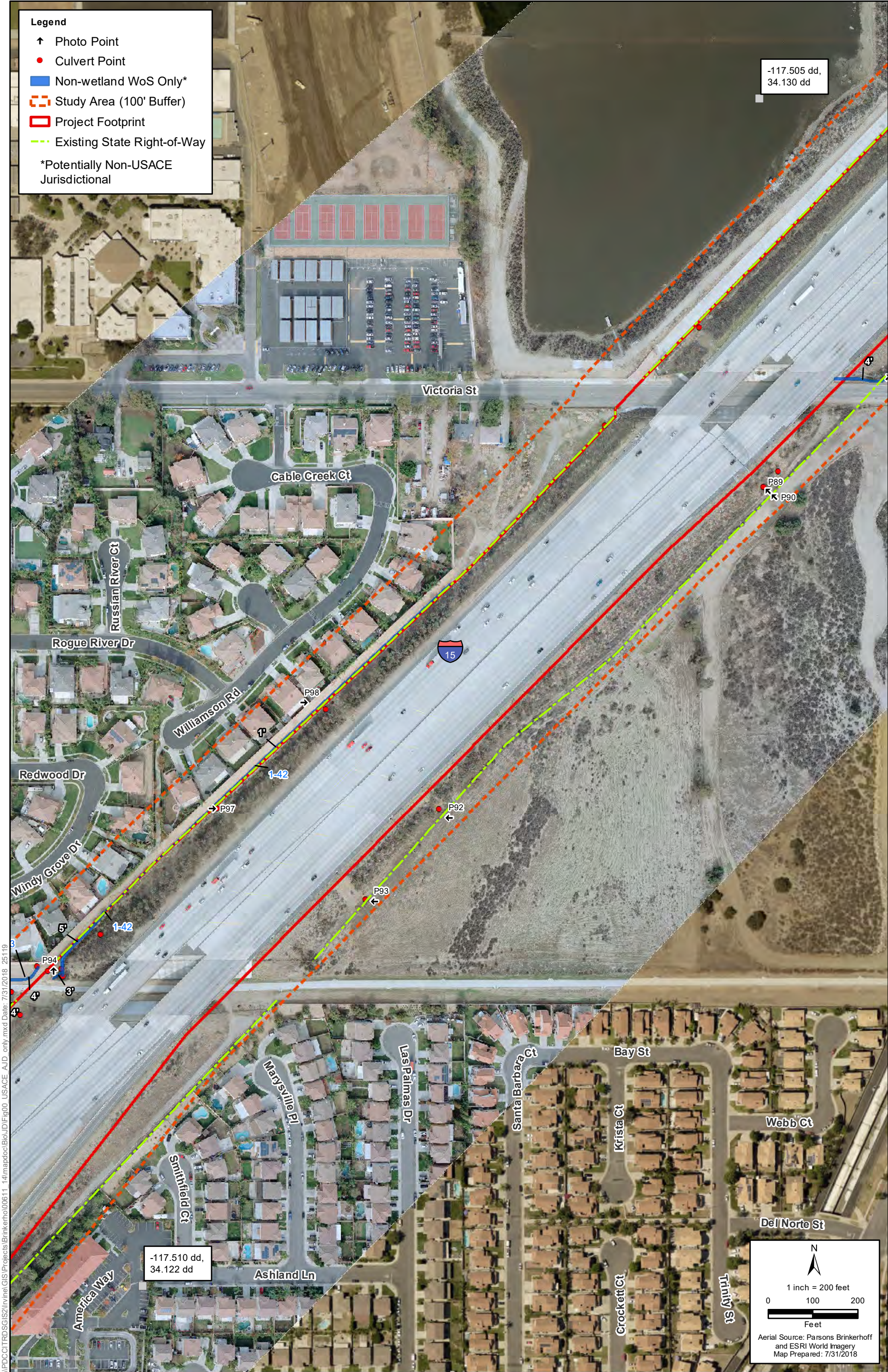
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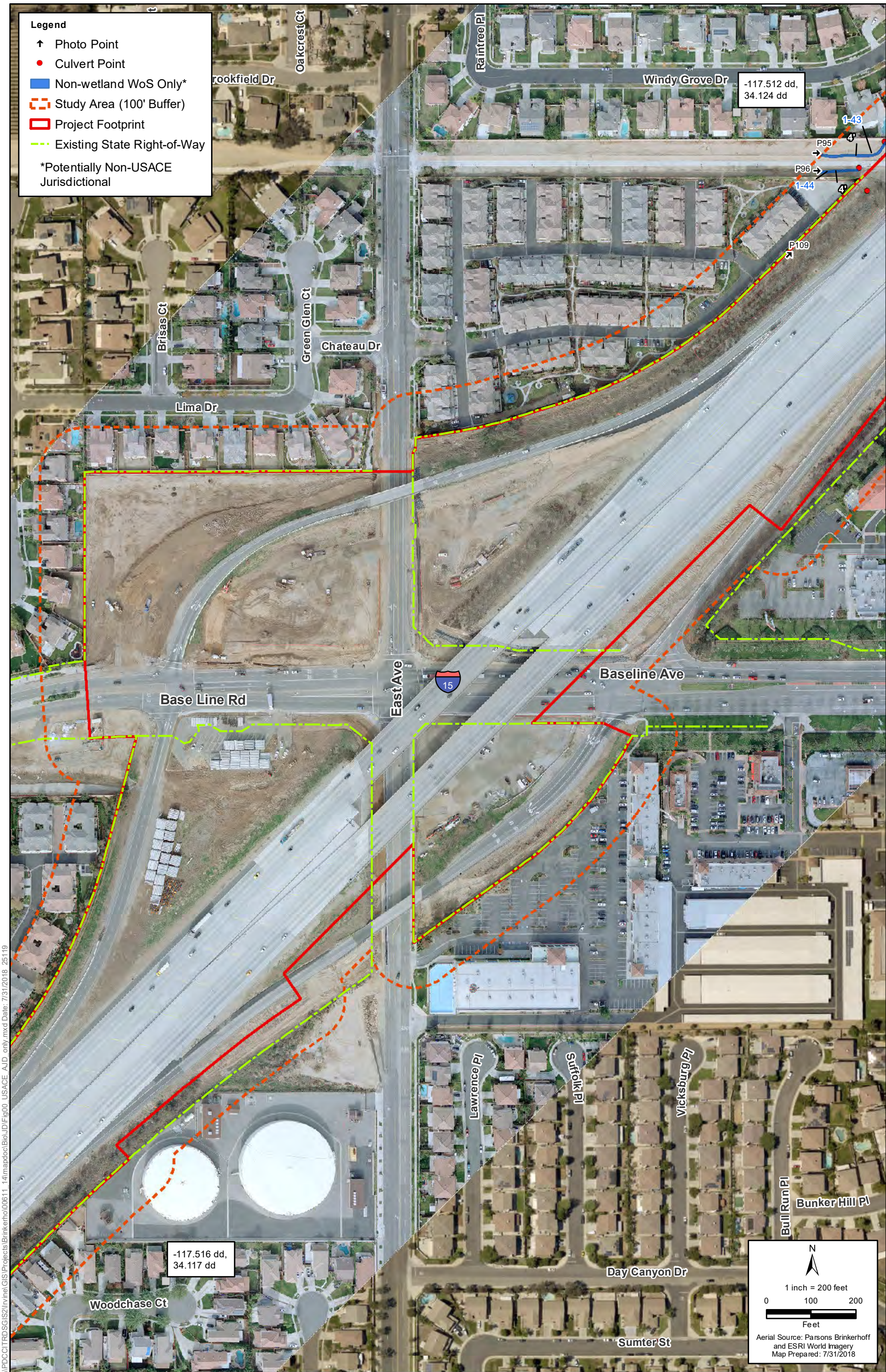


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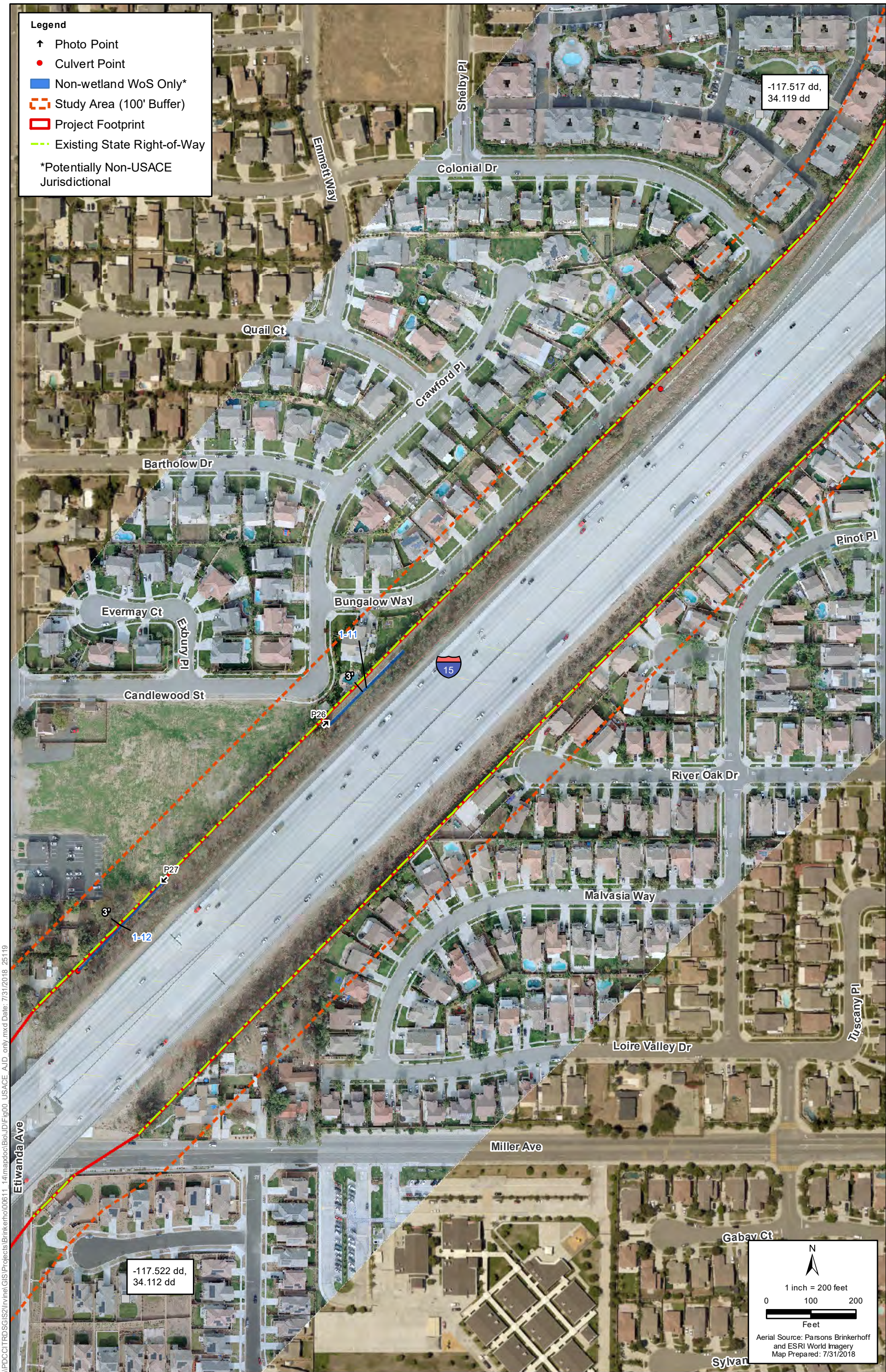


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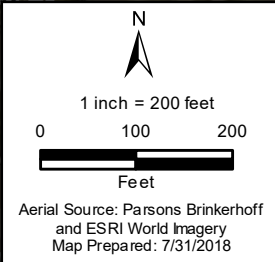


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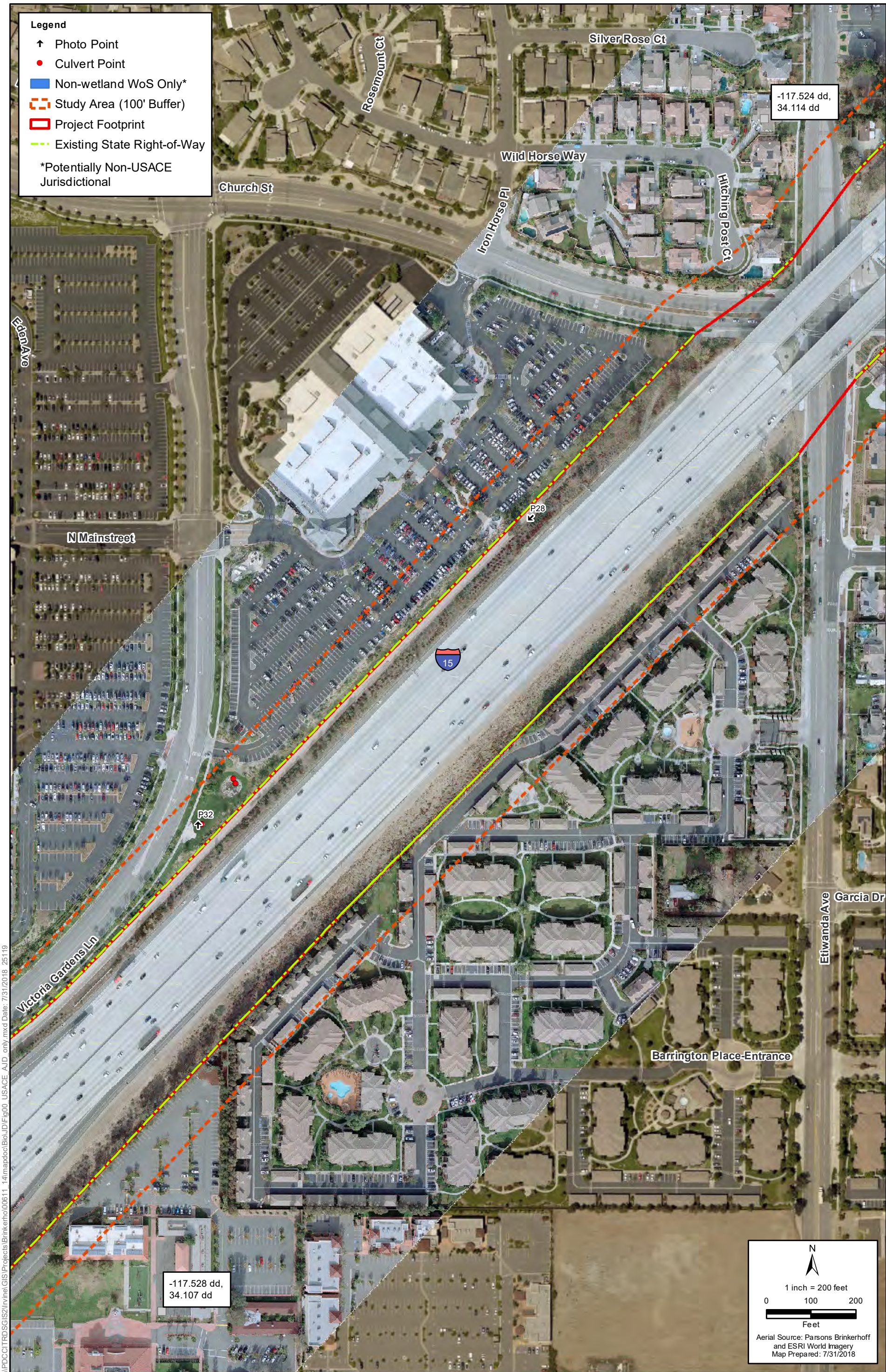
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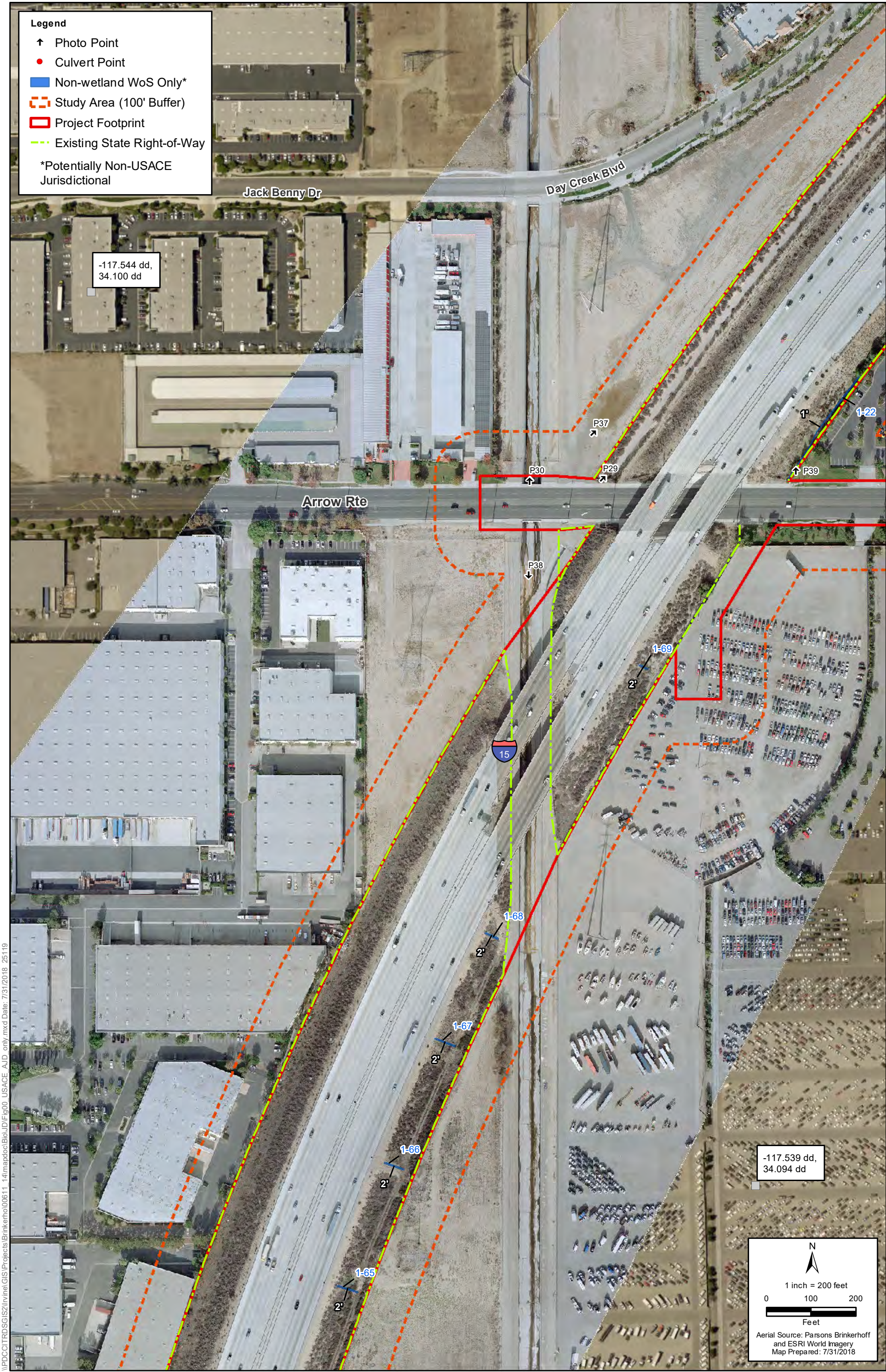


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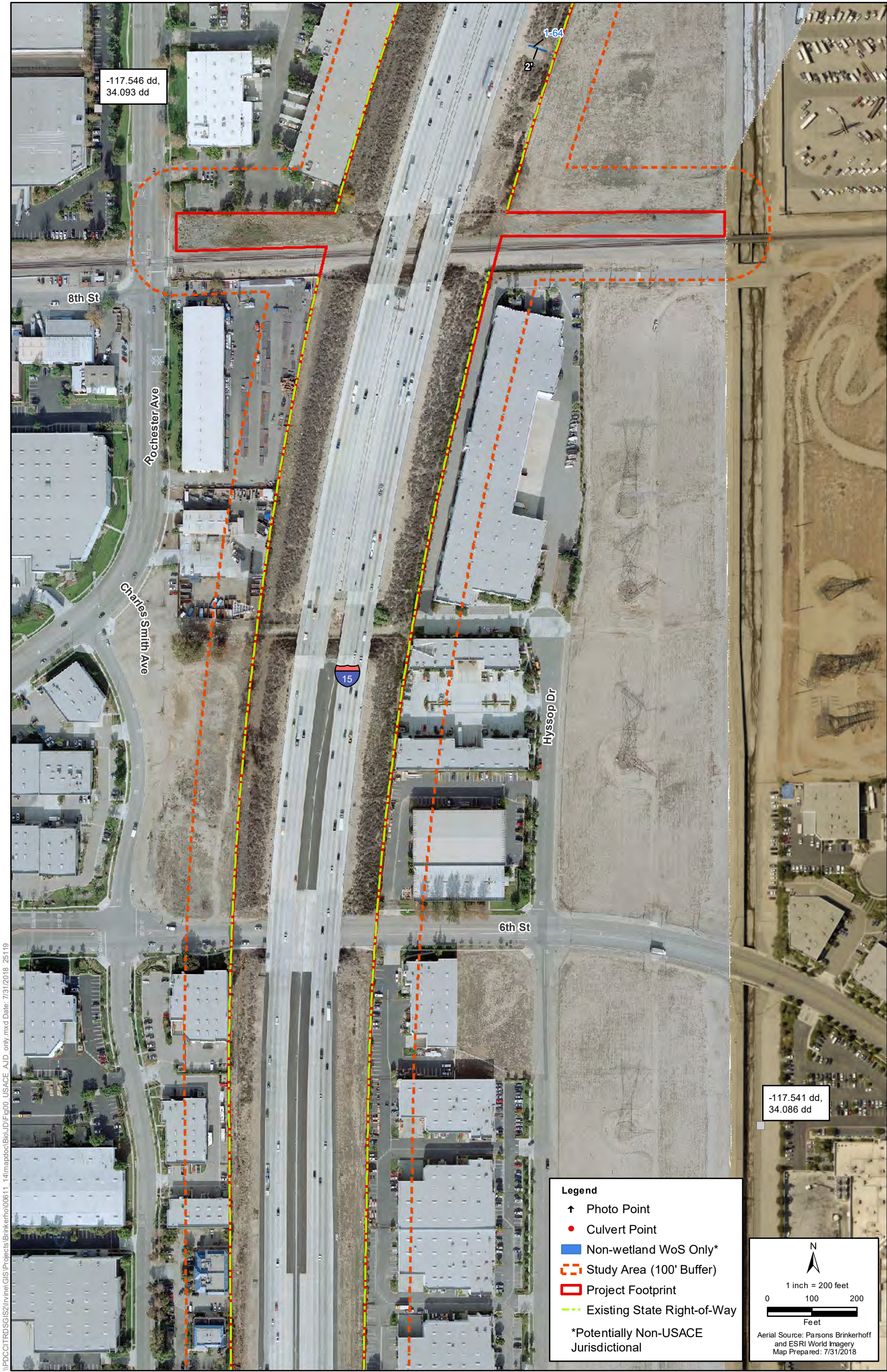


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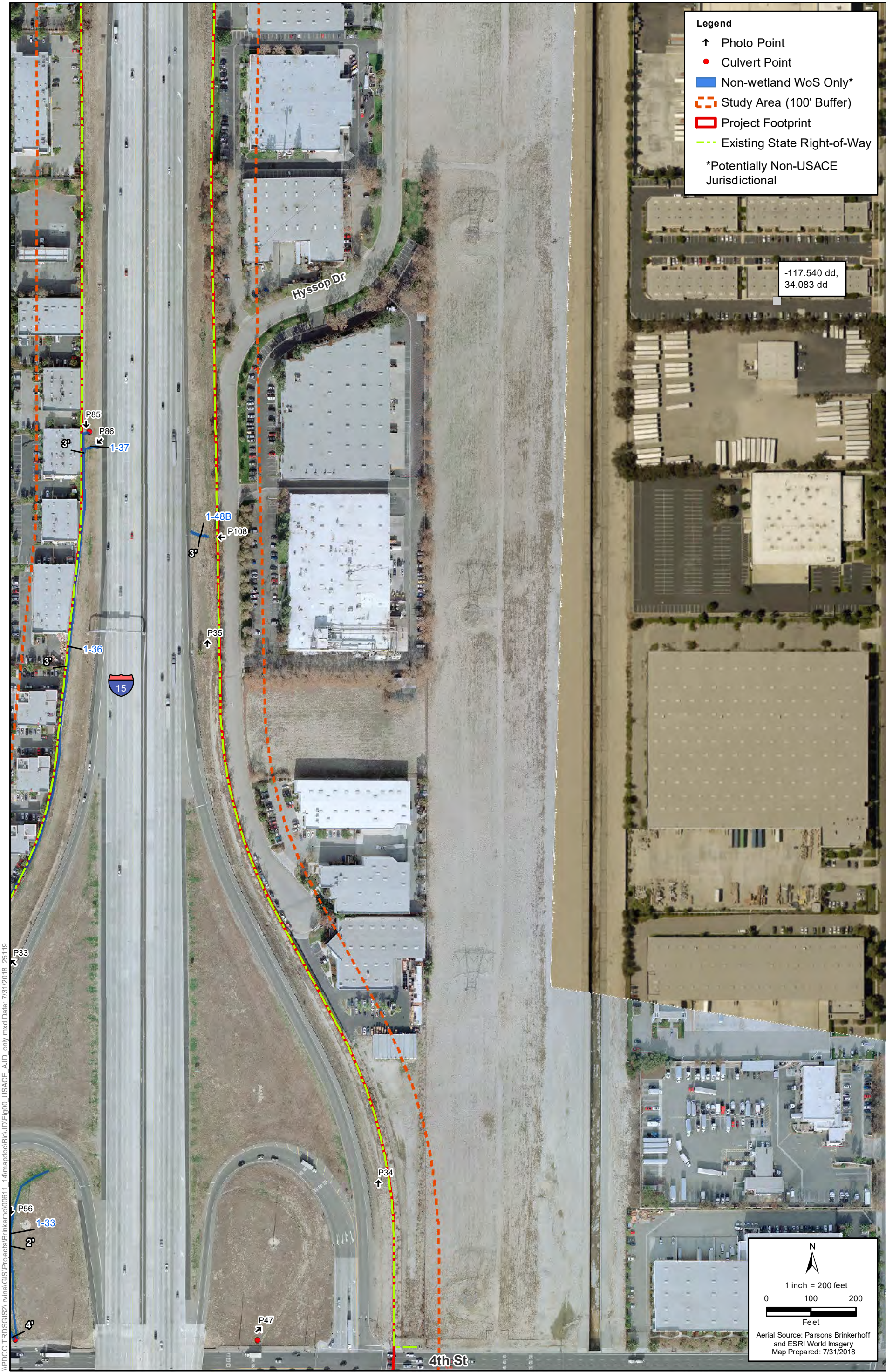
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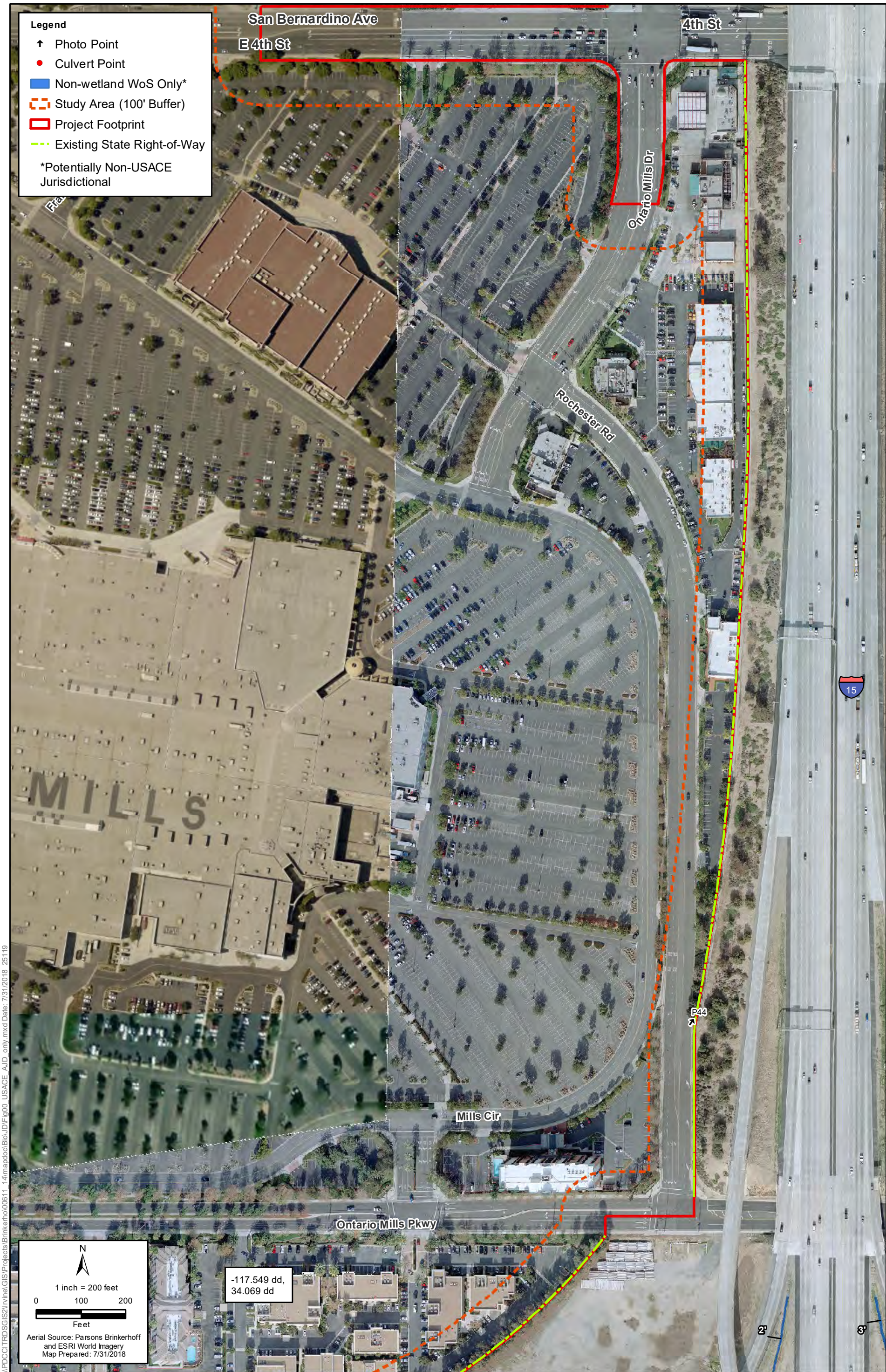
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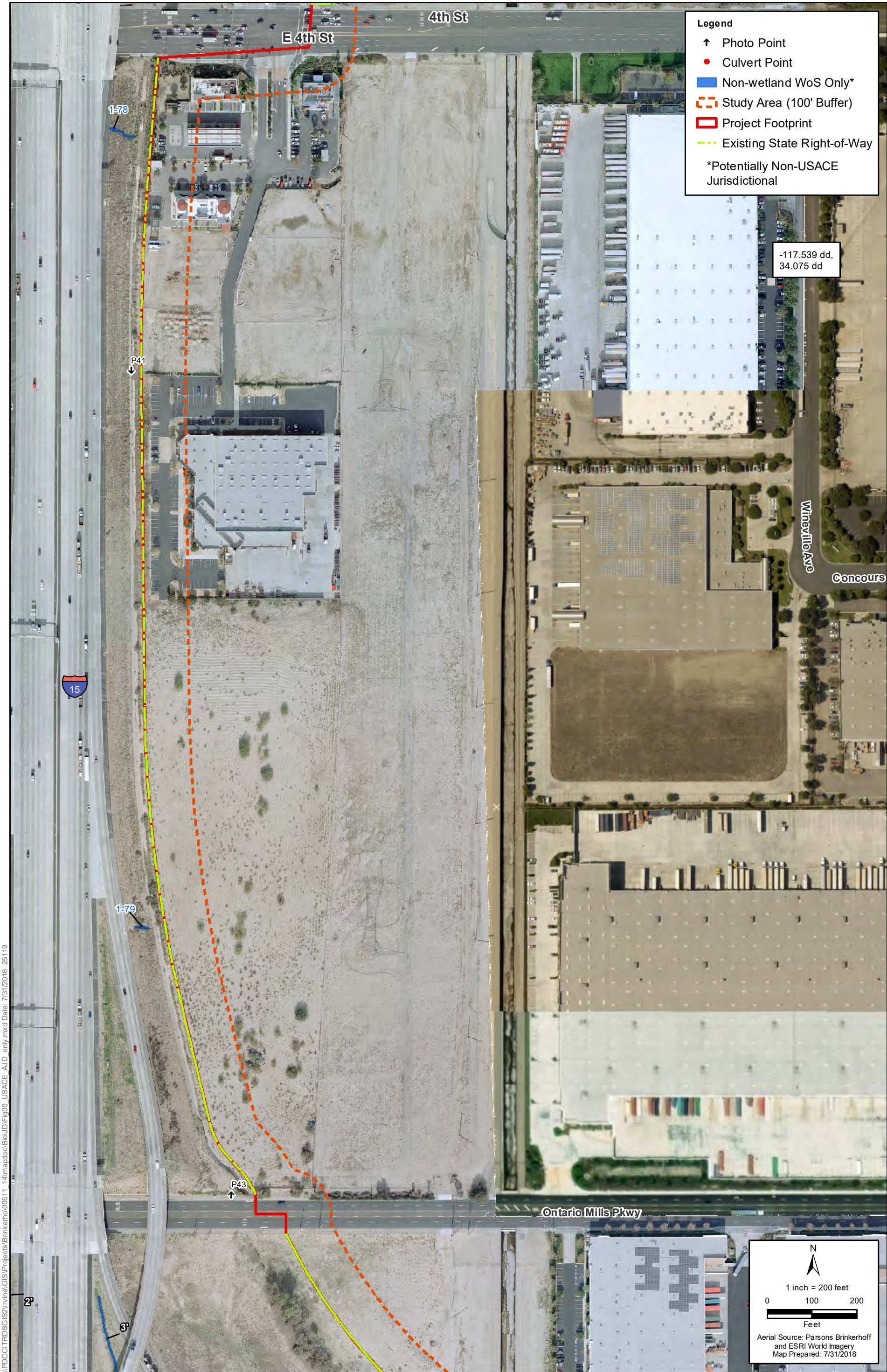


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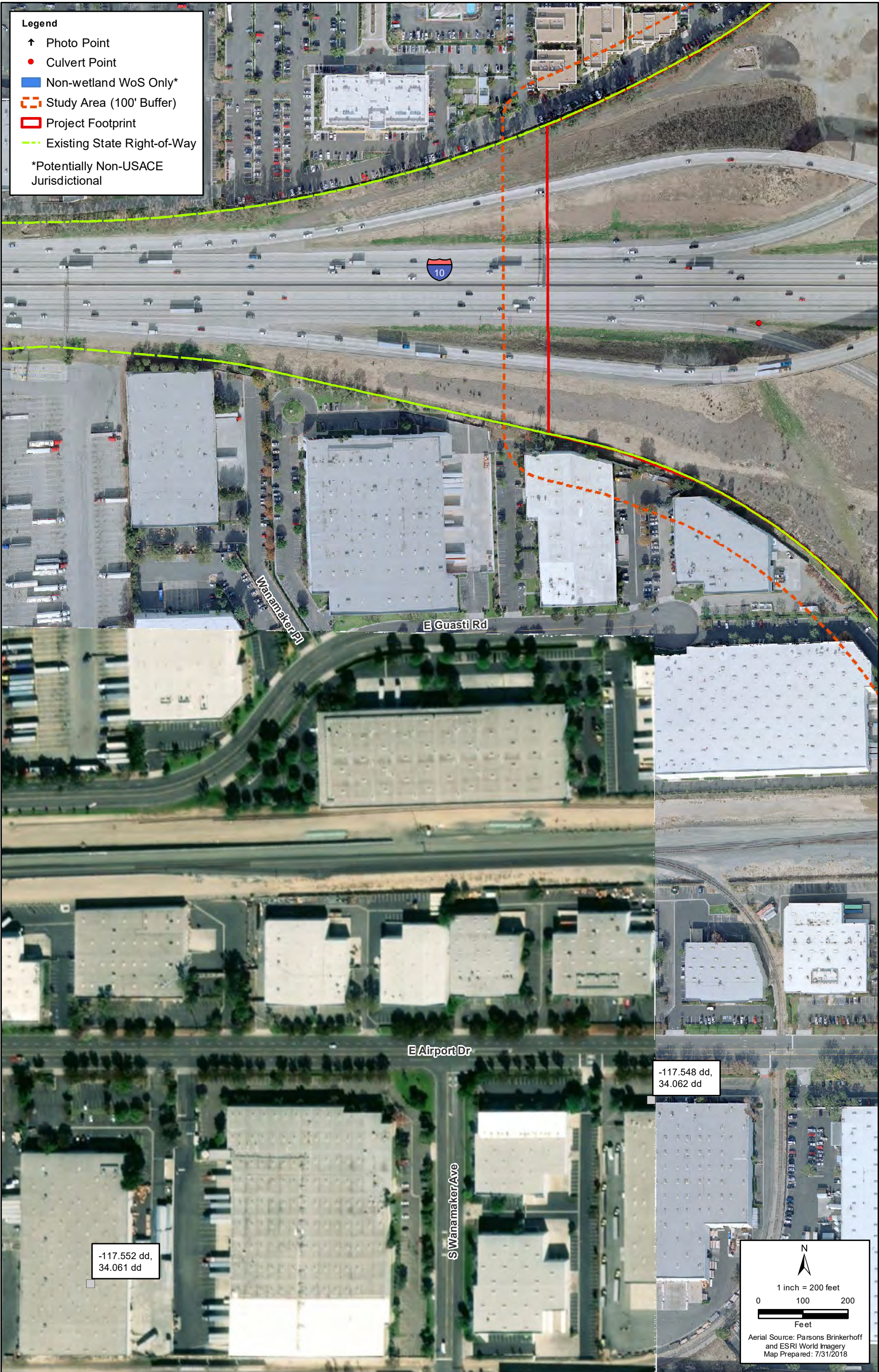
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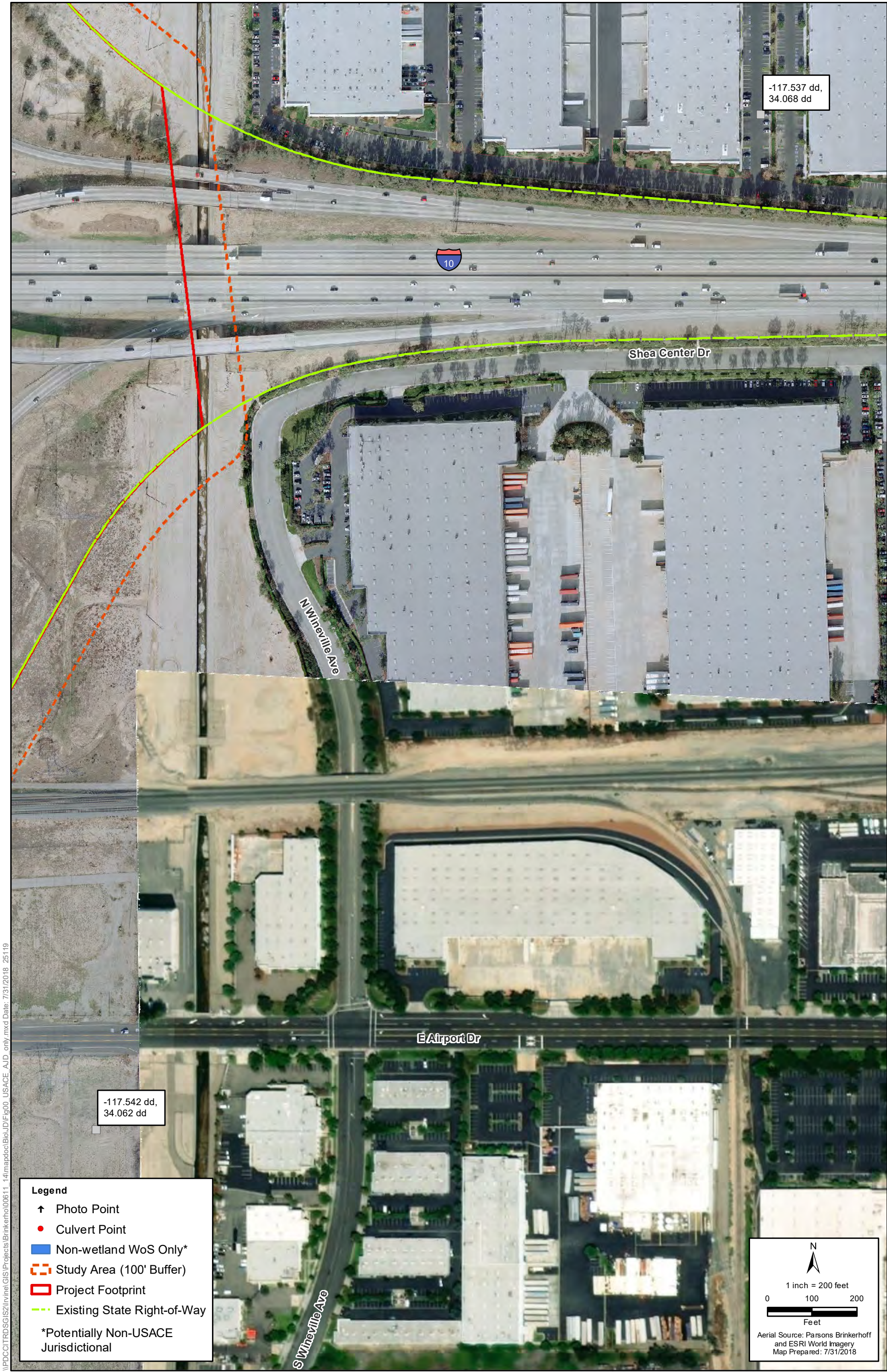


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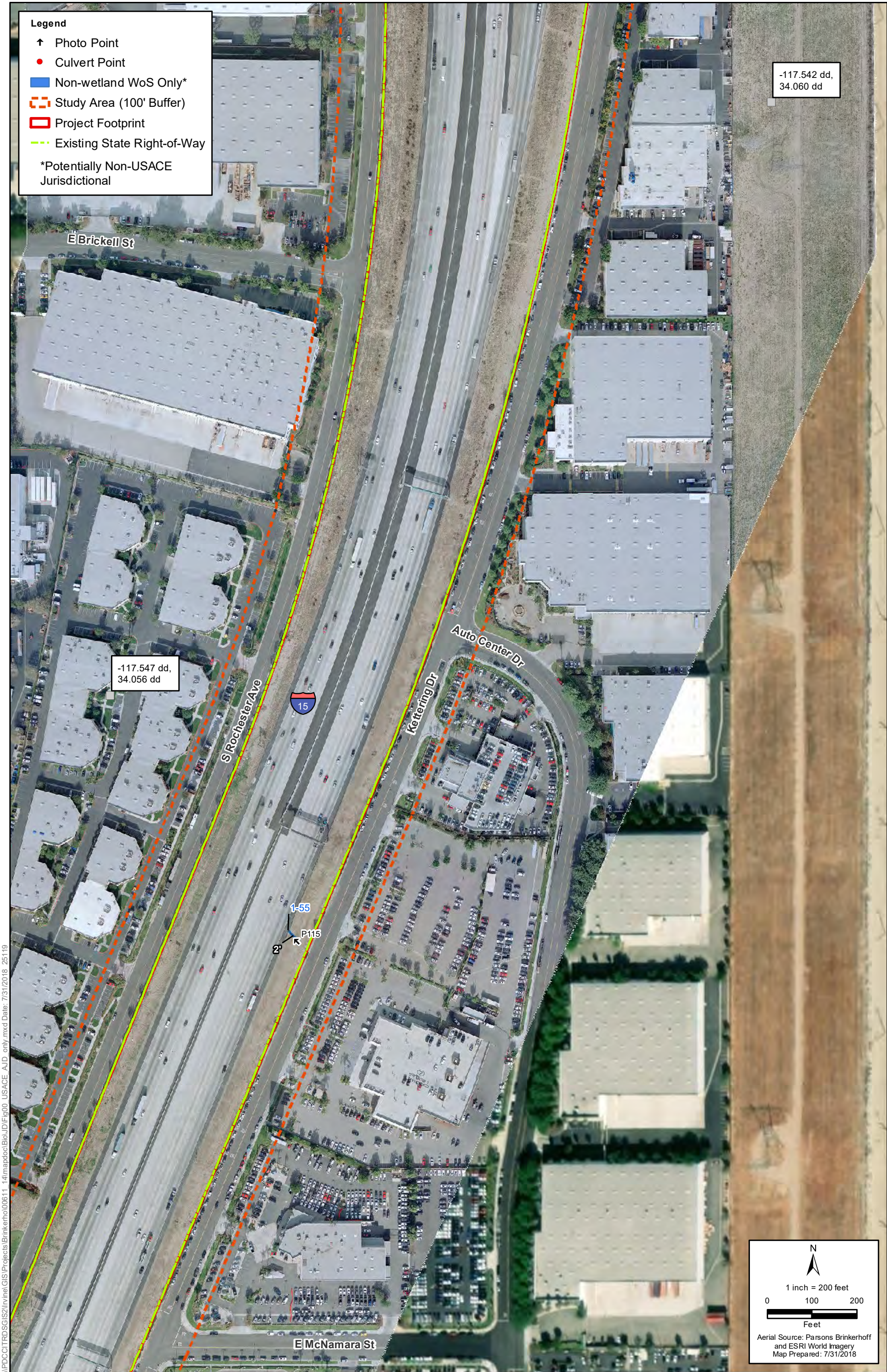


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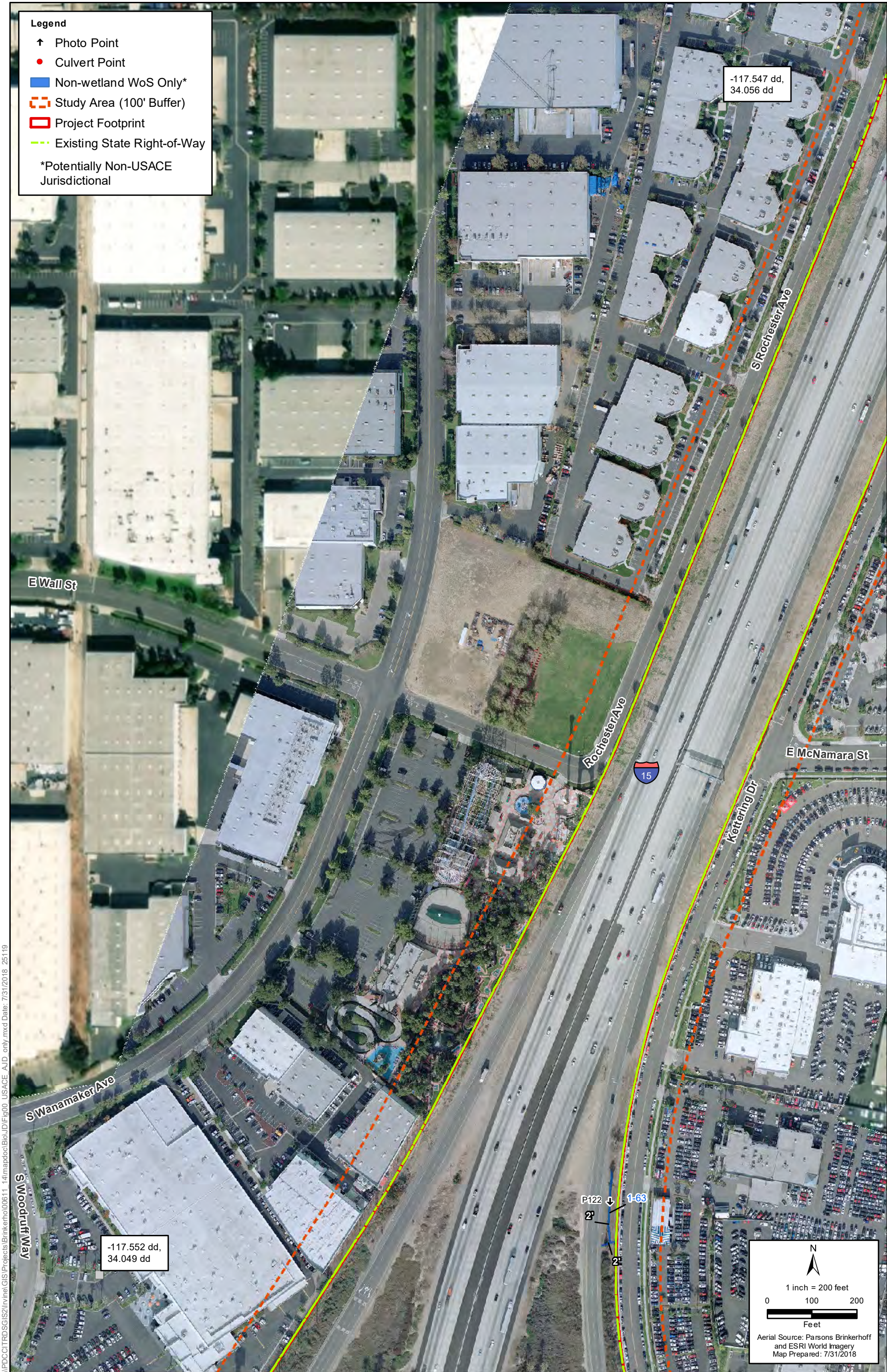


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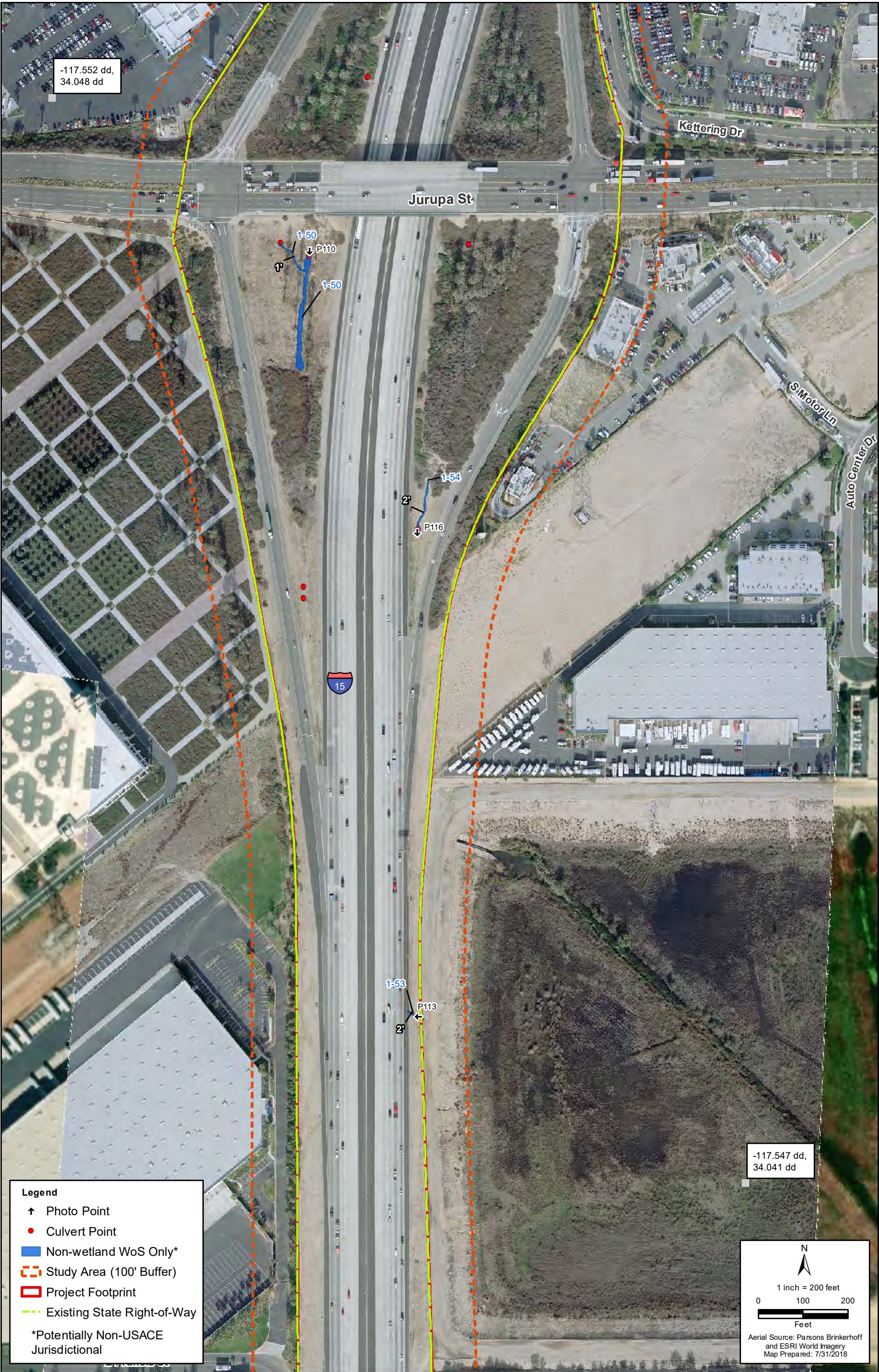
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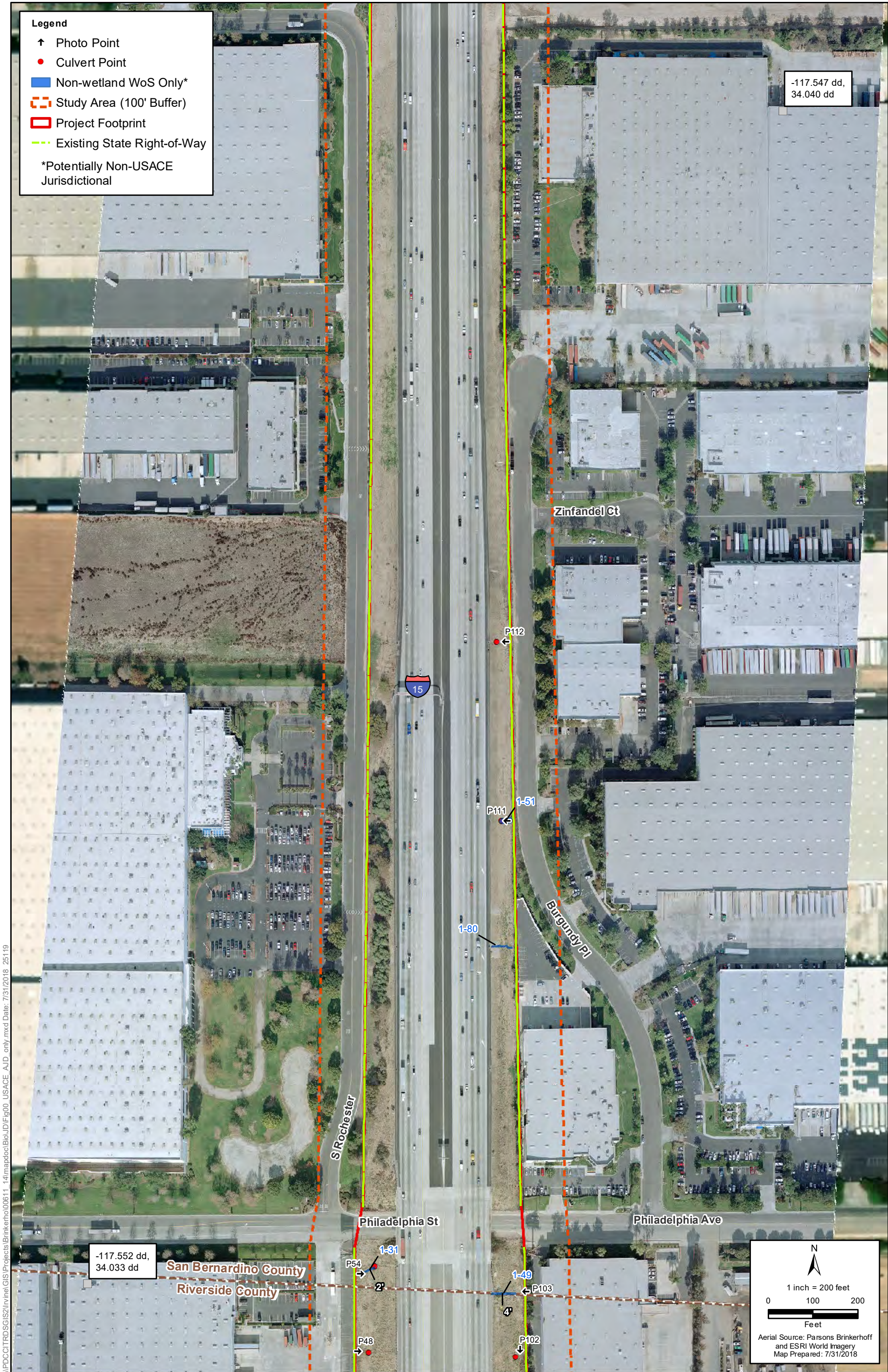


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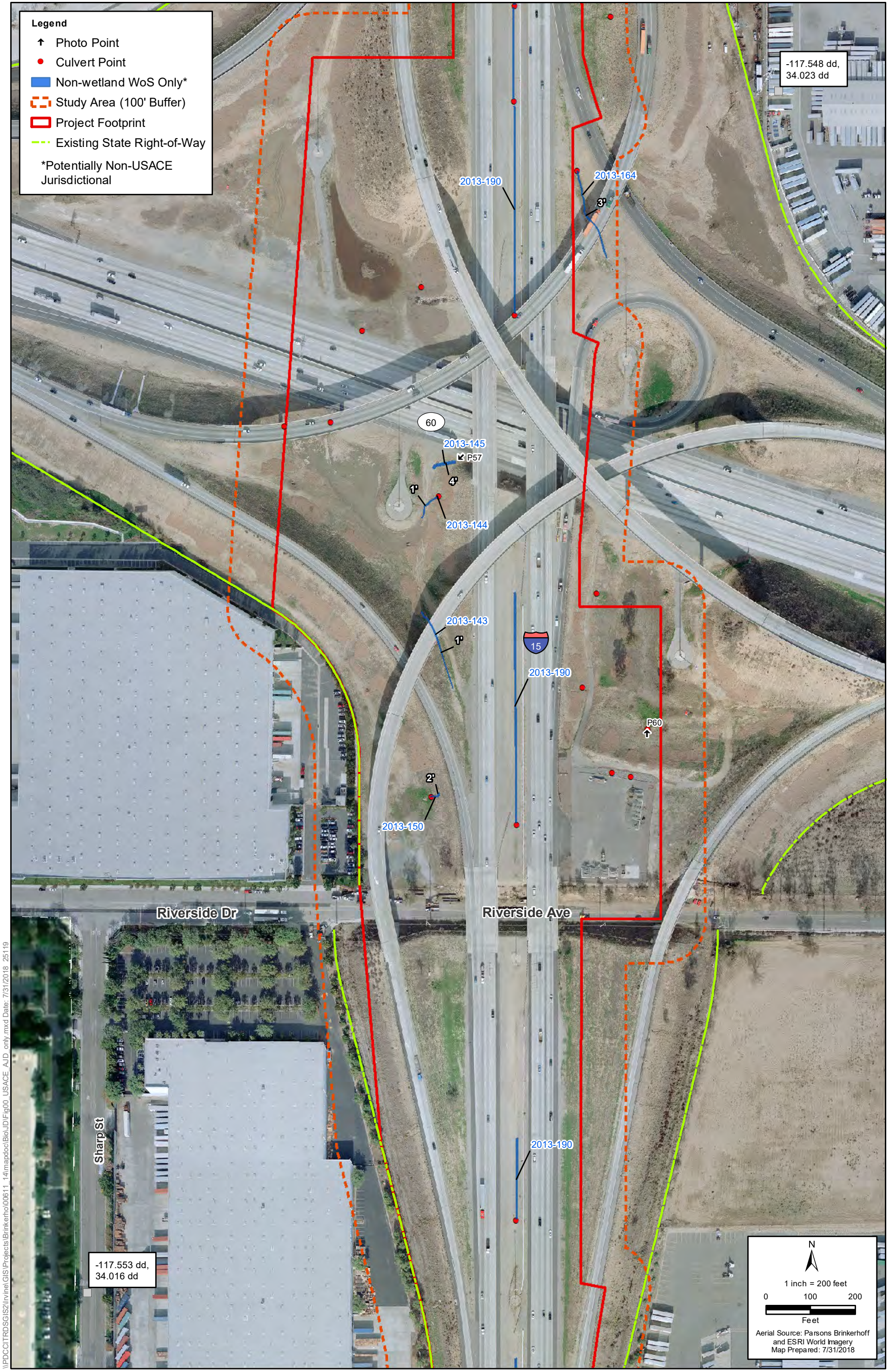
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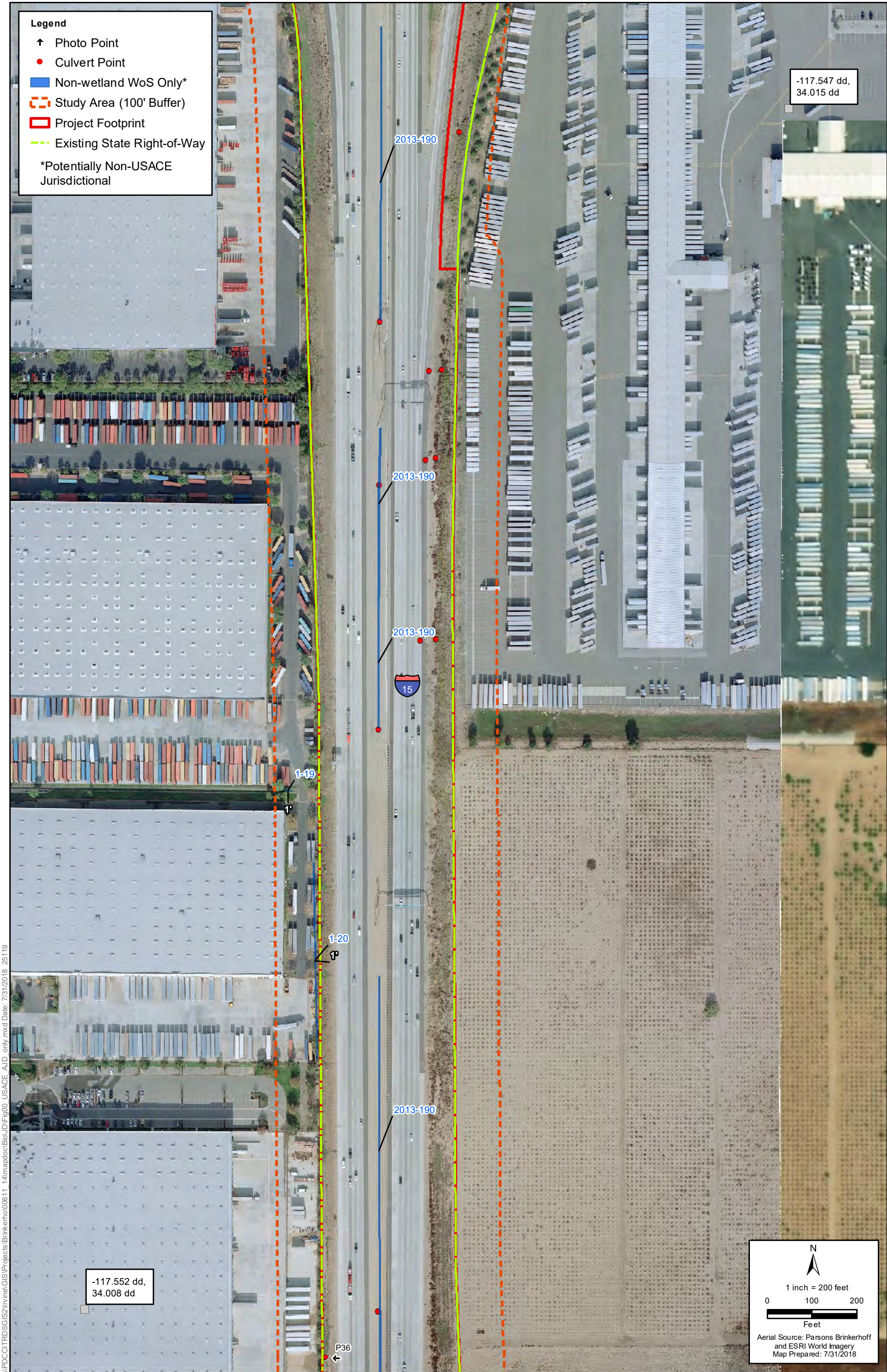
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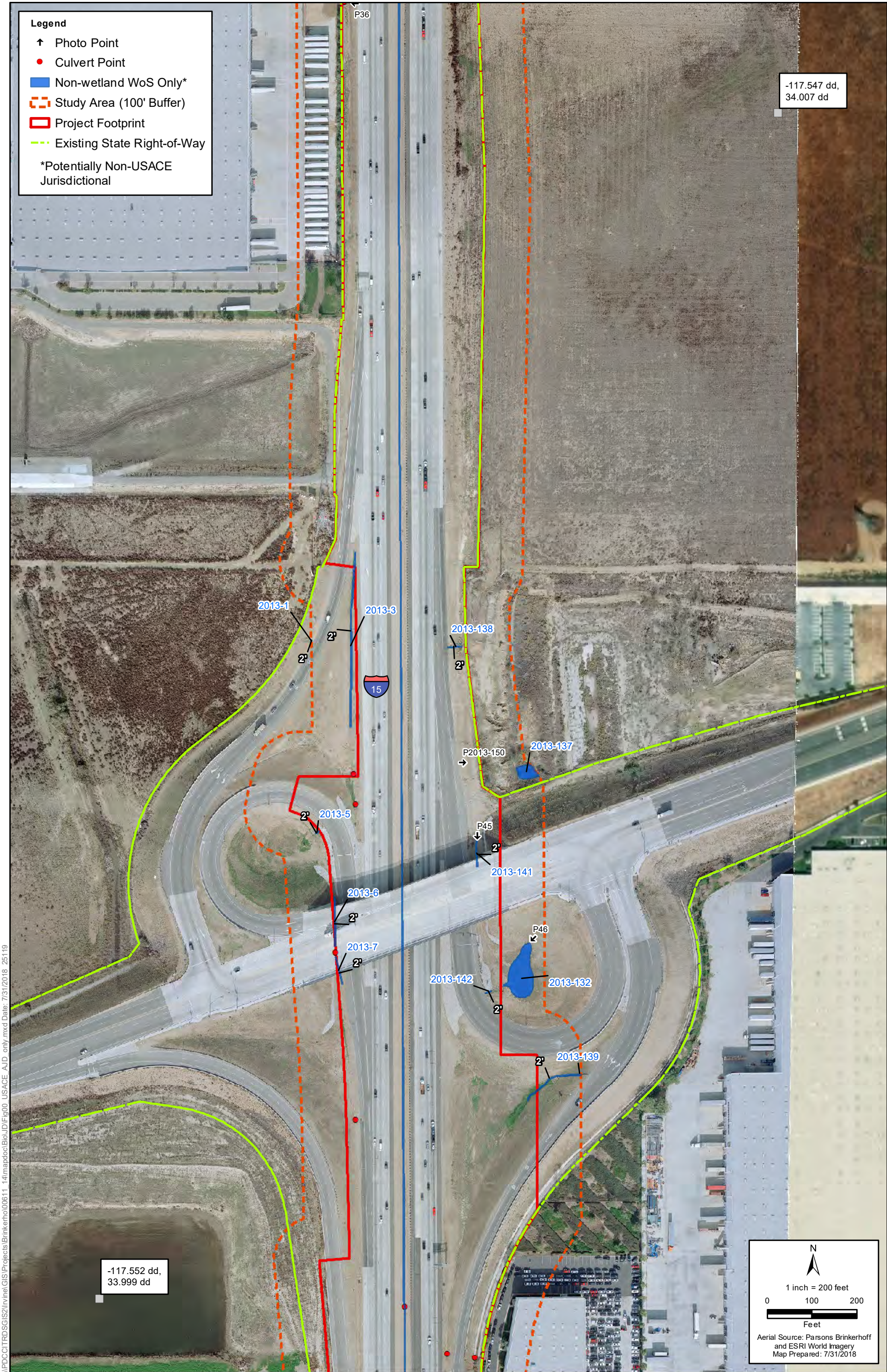


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1 inch = 200 feet

0 100 200

Feet

Aerial Source: Parsons Brinkerhoff
and ESRI World Imagery
Map Prepared: 7/31/2018

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PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office Los Angeles District

File/ORM # SPL-2017-00521-LOB

PJD Date: July 25, 2018

State CA City/County Refer to the Notes Section

Nearest Waterbody: Etiwanda Creek, Day Creek, Santa Ana River

Location: TRS,
Lat/Long or UTM: Lat. 34.093169°, Long. -117543021°

Name/ Address of Person Requesting PJD
Craig Wentworth, Senior
Environmental Planner and Biologist
California Department of Transportation
District 8
464 W. 4th Street
San Bernardino, CA 92401

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters:

Stream Flow:

29,464 linear ft width acres Ephemeral

Wetlands: N/A acre(s) Cowardin Class: Riverine

Name of Any Water Bodies Tidal: N/A
on the Site Identified as
Section 10 Waters: Non-Tidal: N/A

☐ Office (Desk) Determination
☐ Field Determination:

Date of Field Trip:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Aerial Photos
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas:
 - ☒ USGS NHD data.
 - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite quad name: Corona North, Guasti, Cucamonga Peak, Devore
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: <http://sdmdataaccess.nrcs.usda.gov/>
- ☒ National wetlands inventory map(s). Cite name: USFWS. 2016. National Wetlands Inventory Web
- ☐ State/Local wetland inventory map(s):
- ☒ FEMA/FIRM maps: <http://www.fema.gov/>
- ☐ 100-year Floodplain Elevation is:
- ☒ Photographs: ☒ Aerial (Name & Date): ESRI World Imagery (2014)
 - ☒ Other (Name & Date): Site Photographs (January - March 2016)
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

BETANCOURT.LUIS.O.11829
23270

Digitally signed by BETANCOURT.LUIS.O.1182923270
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=BETANCOURT.LUIS.O.1182923270
Date: 2018.07.27 15:04:36 -0700

Signature and Date of Regulatory Project Manager
(REQUIRED)

Signature and Date of Person Requesting Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office Los Angeles District File/ORM # SPL-2017-00521-LOB PJD Date: July 25, 2018
State CA City/County Refer to the Notes Section Person Requesting PJD Craig Wentworth

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource

Notes:

The project extends through the following cities and counties: Eastvale and Jurupa Valley in Riverside County; Ontario, Rancho Cucamonga, and Fontana in San Bernardino County. Please see attached Figure 9a and jurisdictional delineation spreadsheet.

Drain # (JD drain#)	Cowardin Class	Est Amt of Aq. Res. (linear feet)	Waters Type	Latitude	Longitude	Class
1-1	RIVERINE	788	RPW	34.12976039	-117.5040789	Non-section 10 non-wetland
1-2	RIVERINE	395	NRPW	34.17454376	-117.4468425	Non-section 10 non-wetland
1-3	RIVERINE	164	NRPW	34.17611828	-117.443888	Non-section 10 non-wetland
1-4	RIVERINE	119	NRPW	34.17752988	-117.4412326	Non-section 10 non-wetland
1-5	RIVERINE	130	NRPW	34.17366446	-117.4500264	Non-section 10 non-wetland
1-9	RIVERINE	337	NRPW	34.1372575	-117.4956783	Non-section 10 non-wetland
1-13	RIVERINE	6662	NRPW	34.10485153	-117.5348106	Non-section 10 non-wetland
1-14	RIVERINE	2520	NRPW	34.08963388	-117.5413941	Non-section 10 non-wetland
1-15	RIVERINE	131	NRPW	34.11048212	-117.528059	Non-section 10 non-wetland
1-16	RIVERINE	151	NRPW	34.07999389	-117.546023	Non-section 10 non-wetland
1-17	RIVERINE	3011	NRPW	34.08062324	-117.5438724	Non-section 10 non-wetland
1-21	RIVERINE	31	NRPW	34.00784999	-117.5507324	Non-section 10 non-wetland
1-24	RIVERINE	2558	NRPW	34.07354382	-117.5441901	Non-section 10 non-wetland
1-25	RIVERINE	2136	NRPW	34.07411147	-117.5455673	Non-section 10 non-wetland
1-26	RIVERINE	494	NRPW	34.07798884	-117.5438269	Non-section 10 non-wetland
1-27	RIVERINE	20	NRPW	34.03269843	-117.5508172	Non-section 10 non-wetland
1-28	RIVERINE	44	NRPW	34.0315607	-117.5508931	Non-section 10 non-wetland
1-29	RIVERINE	27	NRPW	34.03091771	-117.5508717	Non-section 10 non-wetland
1-30	RIVERINE	981	NRPW	34.02907279	-117.549408	Non-section 10 non-wetland
1-31	RIVERINE	25	NRPW	34.03318979	-117.5507873	Non-section 10 non-wetland
1-34	RIVERINE	42	NRPW	34.01994827	-117.54925	Non-section 10 non-wetland
1-38	RIVERINE	18	NRPW	34.12767136	-117.5055391	Non-section 10 non-wetland
1-39	RIVERINE	98	NRPW	34.12768111	-117.5054845	Non-section 10 non-wetland
1-40	RIVERINE	19	NRPW	34.12571851	-117.5079313	Non-section 10 non-wetland
1-41	RIVERINE	10	NRPW	34.12517436	-117.5084826	Non-section 10 non-wetland
1-45	RIVERINE	8	NRPW	34.12575913	-117.5095971	Non-section 10 non-wetland
1-46	RIVERINE	12	NRPW	34.12636785	-117.5088035	Non-section 10 non-wetland
1-48	RIVERINE	142	NRPW	34.03246613	-117.5496828	Non-section 10 non-wetland

1-49 B	RIVERINE	237	NRPW	34.12432284	-117.5113404	Non-section 10 non-wetland
1-52	RIVERINE	31	NRPW	34.03703938	-117.5497883	Non-section 10 non-wetland
1-58	RIVERINE	20	NRPW	34.06775082	-117.5455339	Non-section 10 non-wetland
1-59	RIVERINE	62	NRPW	34.06777657	-117.5454066	Non-section 10 non-wetland
1-72	RIVERINE	1740	NRPW	34.16763562	-117.4574	Non-section 10 non-wetland
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1-75	RIVERINE	1235	NRPW	34.13019224	-117.502371	Non-section 10 non-wetland
1-82	RIVERINE	914	NRPW	34.12939352	-117.5055857	Non-section 10 non-wetland
2013-9	RIVERINE	2257	NRPW	33.99497242	-117.5506944	Non-section 10 non-wetland
2013-130	RIVERINE	8	NRPW	33.99822866	-117.5499583	Non-section 10 non-wetland
2013-147	RIVERINE	270	NRPW	34.01357842	-117.5498047	Non-section 10 non-wetland
2013-148	RIVERINE	29	NRPW	34.01539605	-117.5496721	Non-section 10 non-wetland
2013-162	RIVERINE	317	NRPW	34.02507351	-117.5496772	Non-section 10 non-wetland
2013-163	RIVERINE	12	NRPW	34.02015626	-117.5497403	Non-section 10 non-wetland
9-14	RIVERINE	486	NRPW	33.99969726	-117.5496383	Non-section 10 non-wetland
9-26	RIVERINE	365	NRPW	34.00518871	-117.5508101	Non-section 10 non-wetland
9-27	RIVERINE	272	NRPW	34.00539506	-117.5510042	Non-section 10 non-wetland

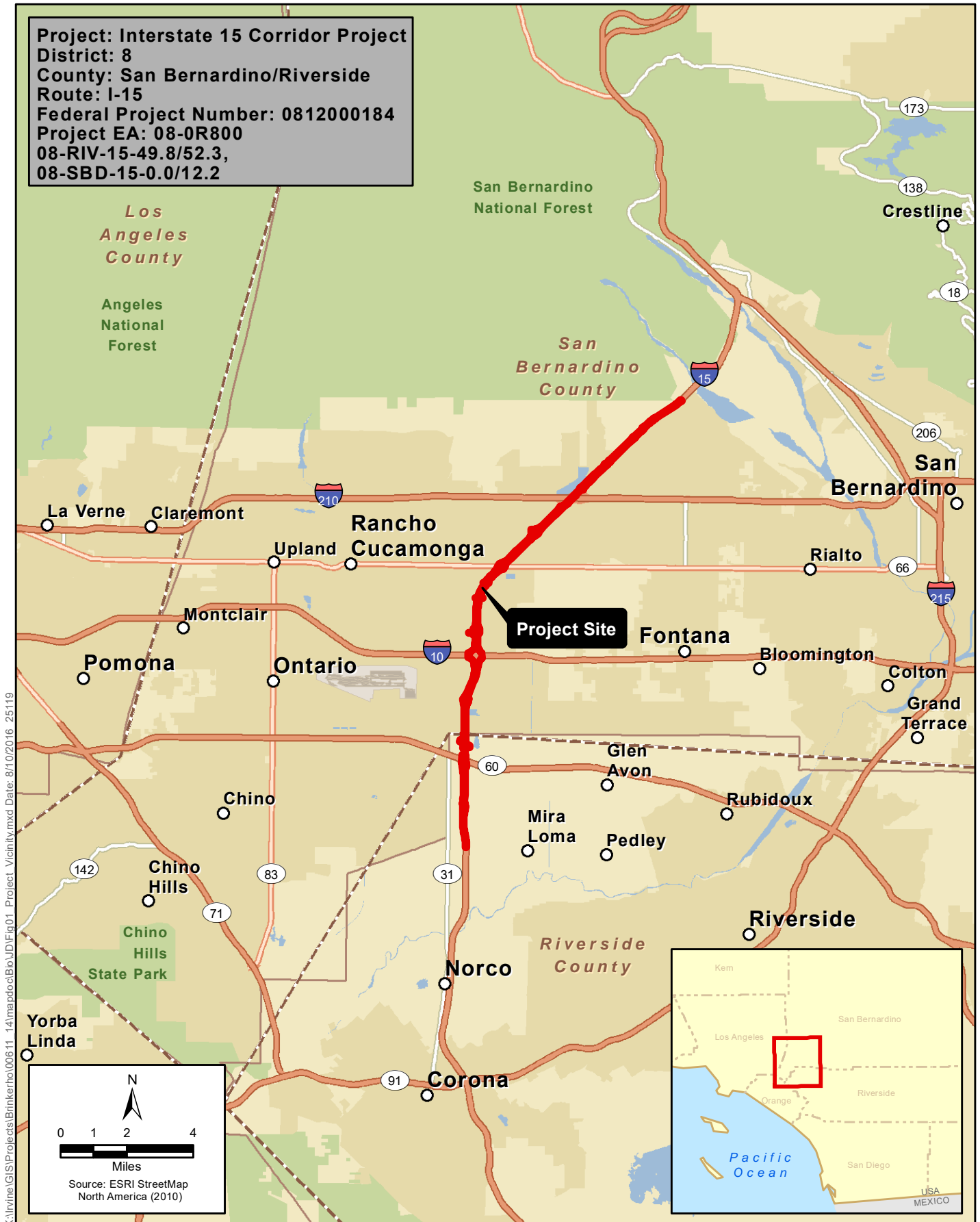


Figure 1
Project Vicinity Map
Interstate 15 Corridor Project

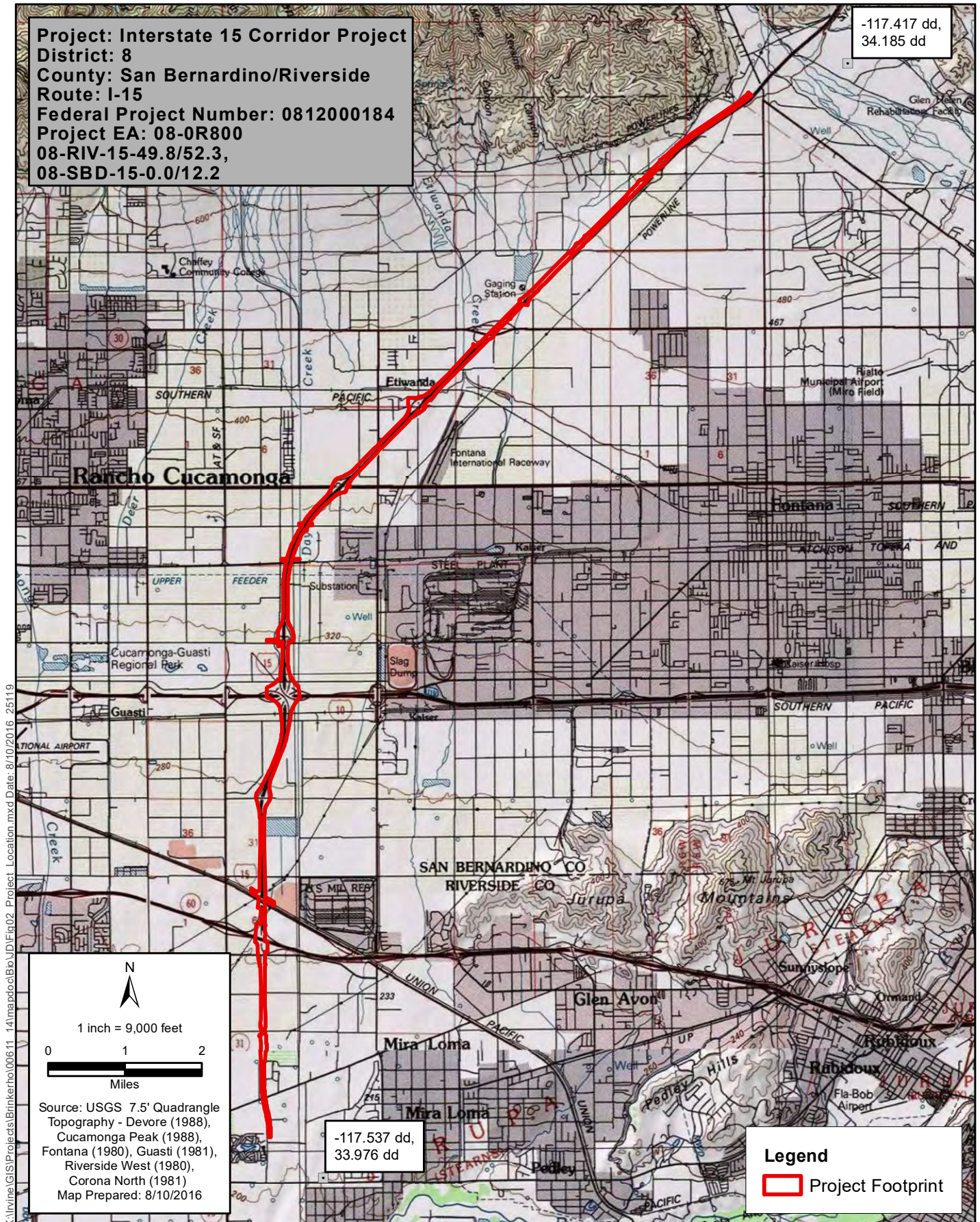


Figure 2
Project Location Map
Interstate 15 Corridor Project



Figure 3
National Hydrography Dataset Map
Interstate 15 Corridor Project

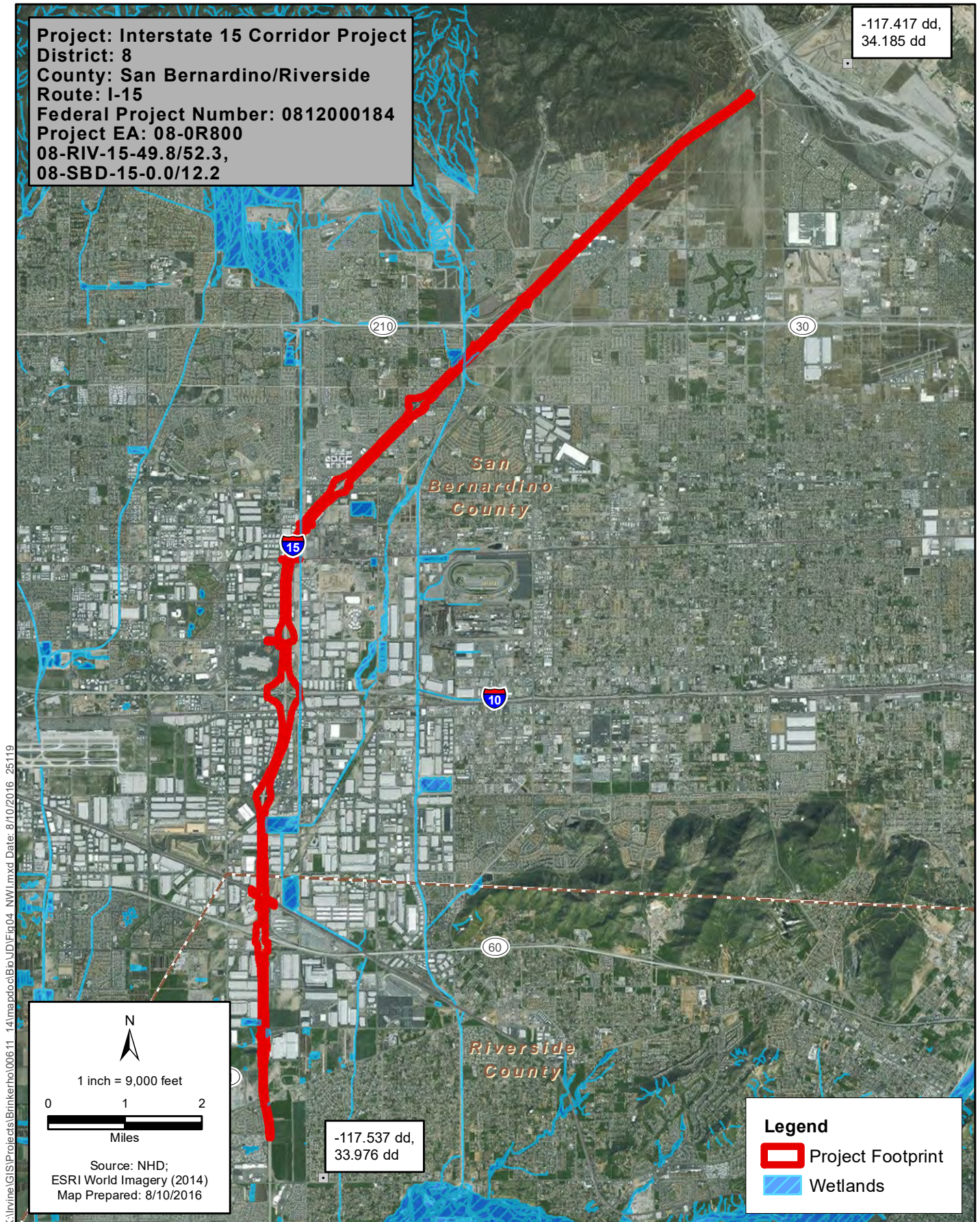


Figure 4
National Wetlands Inventory Map
Interstate 15 Corridor Project

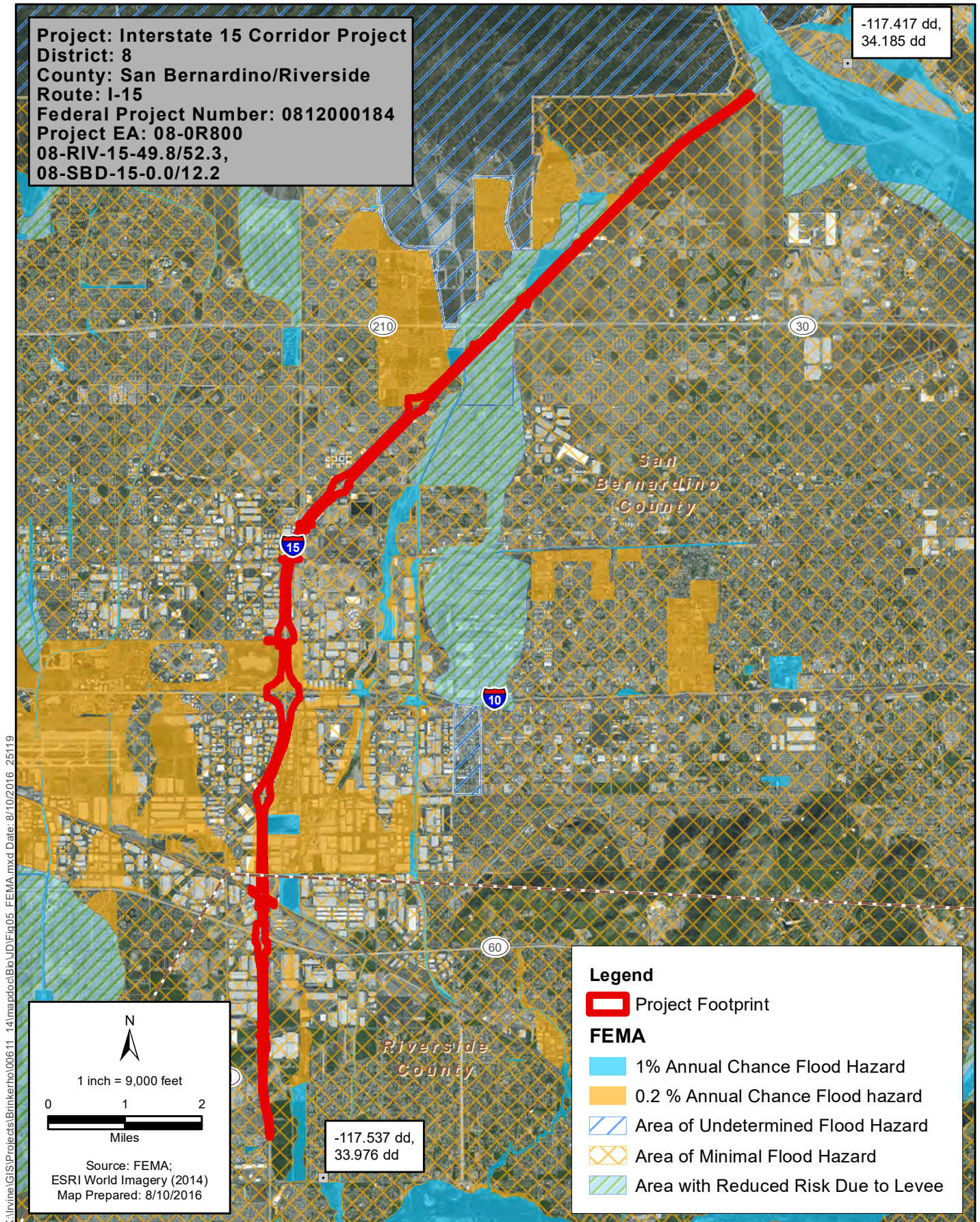


Figure 5
FEMA 100 - year Floodplain Map
Interstate 15 Corridor Project

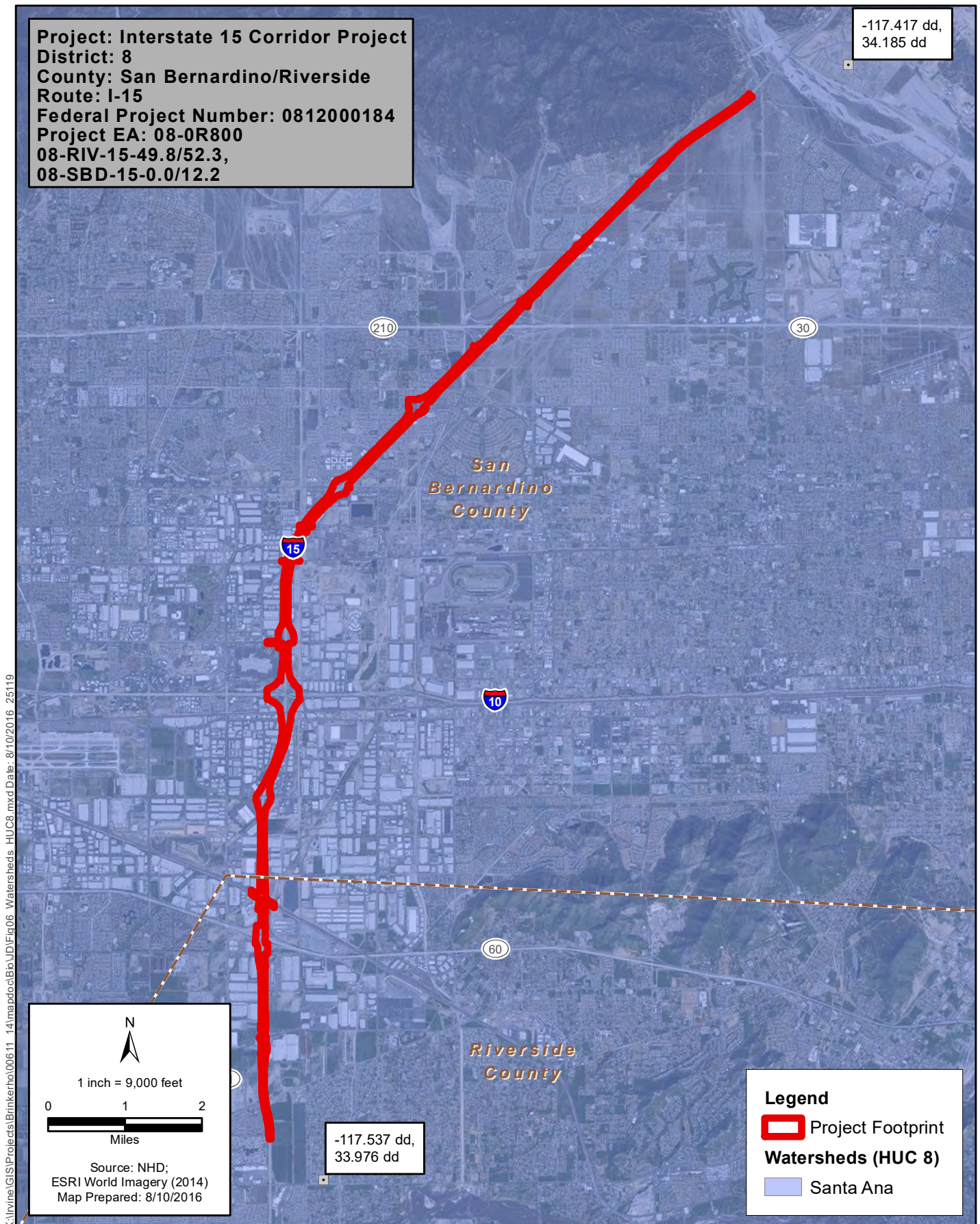


Figure 6
Watershed - HUC 8
Interstate 15 Corridor Project

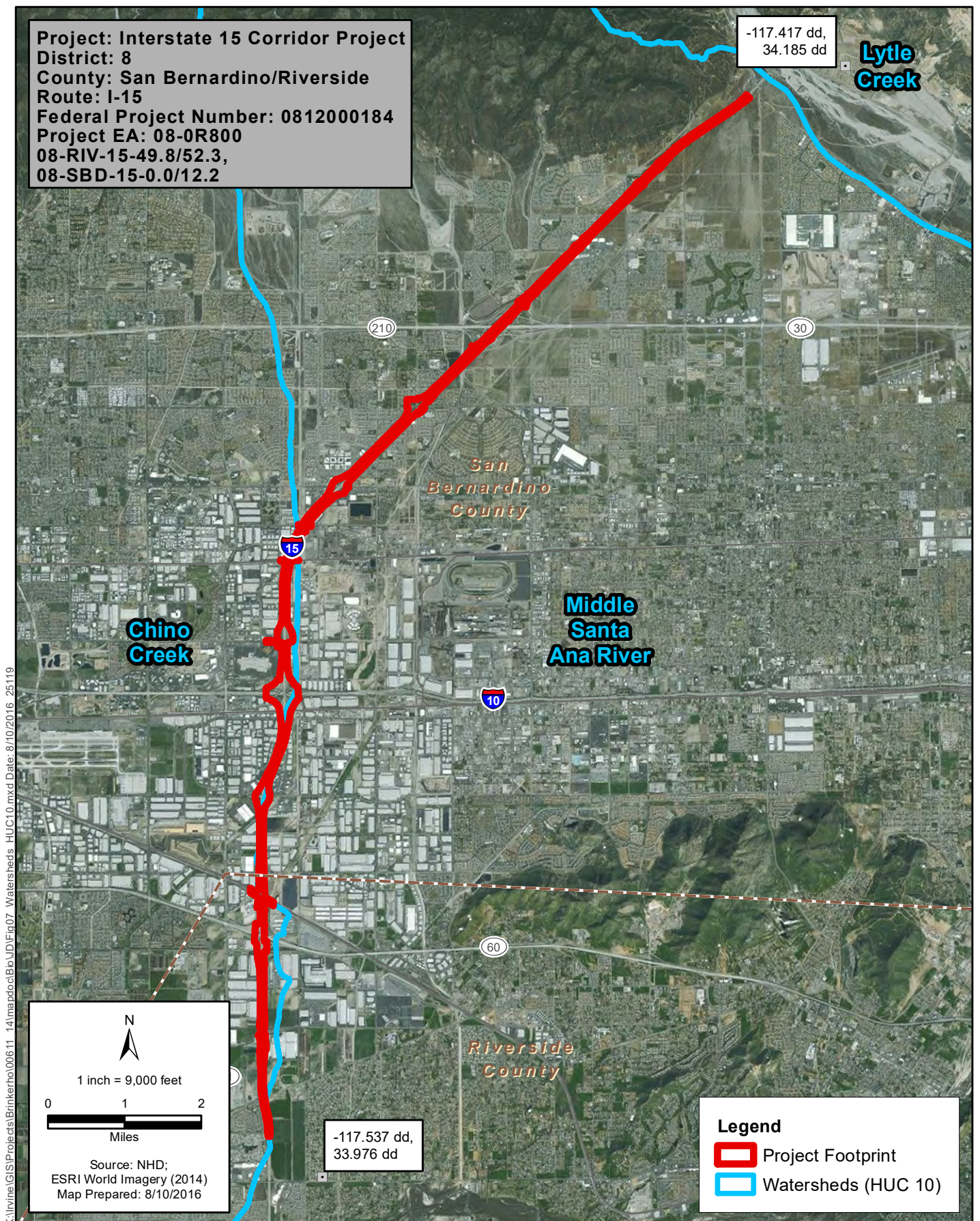


Figure 7
Watershed - HUC 10
Interstate 15 Corridor Project

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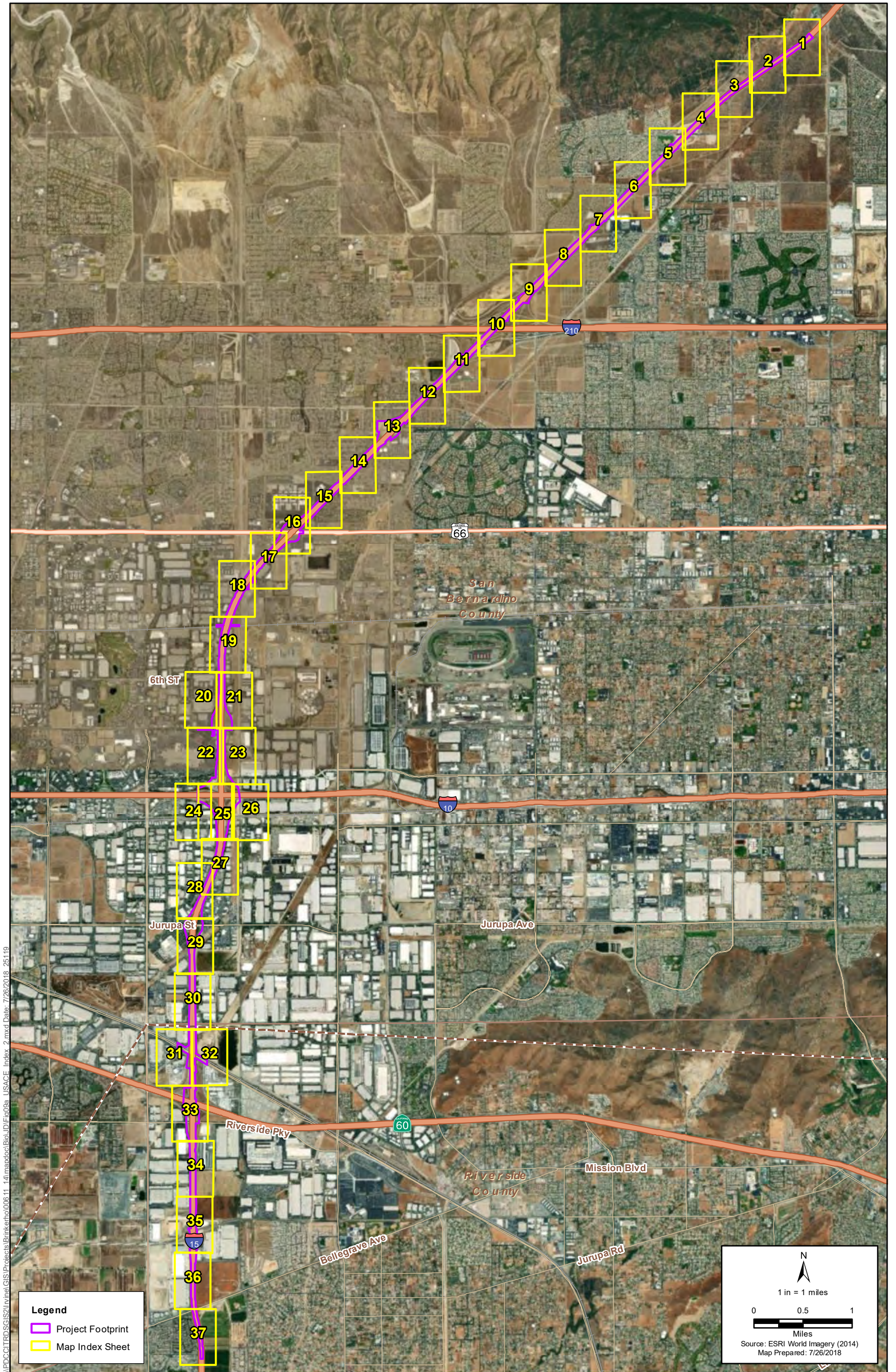


Figure 9a - Index
USACE/RWCQB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 1
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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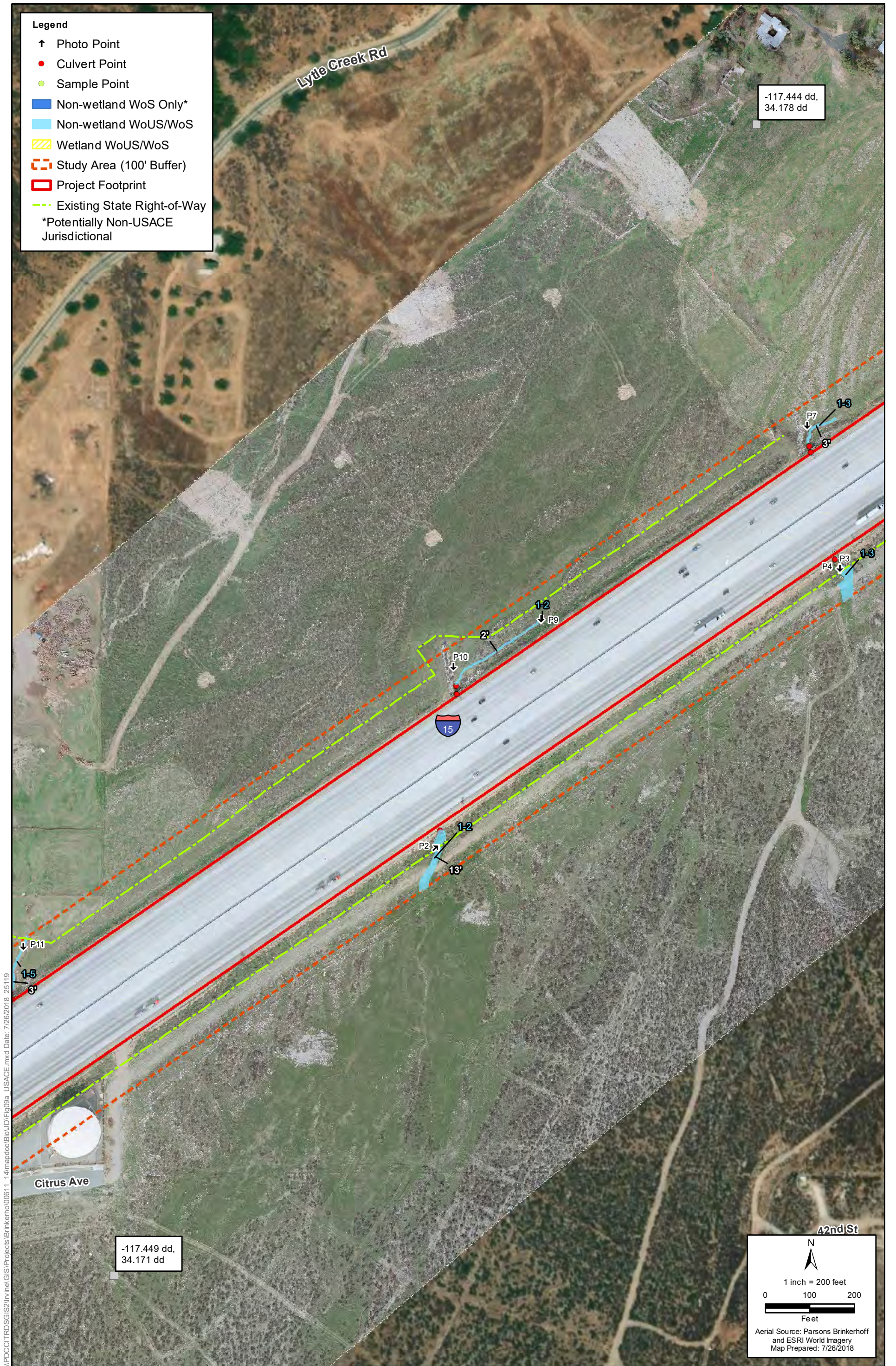


Figure 9a - Sheet 2
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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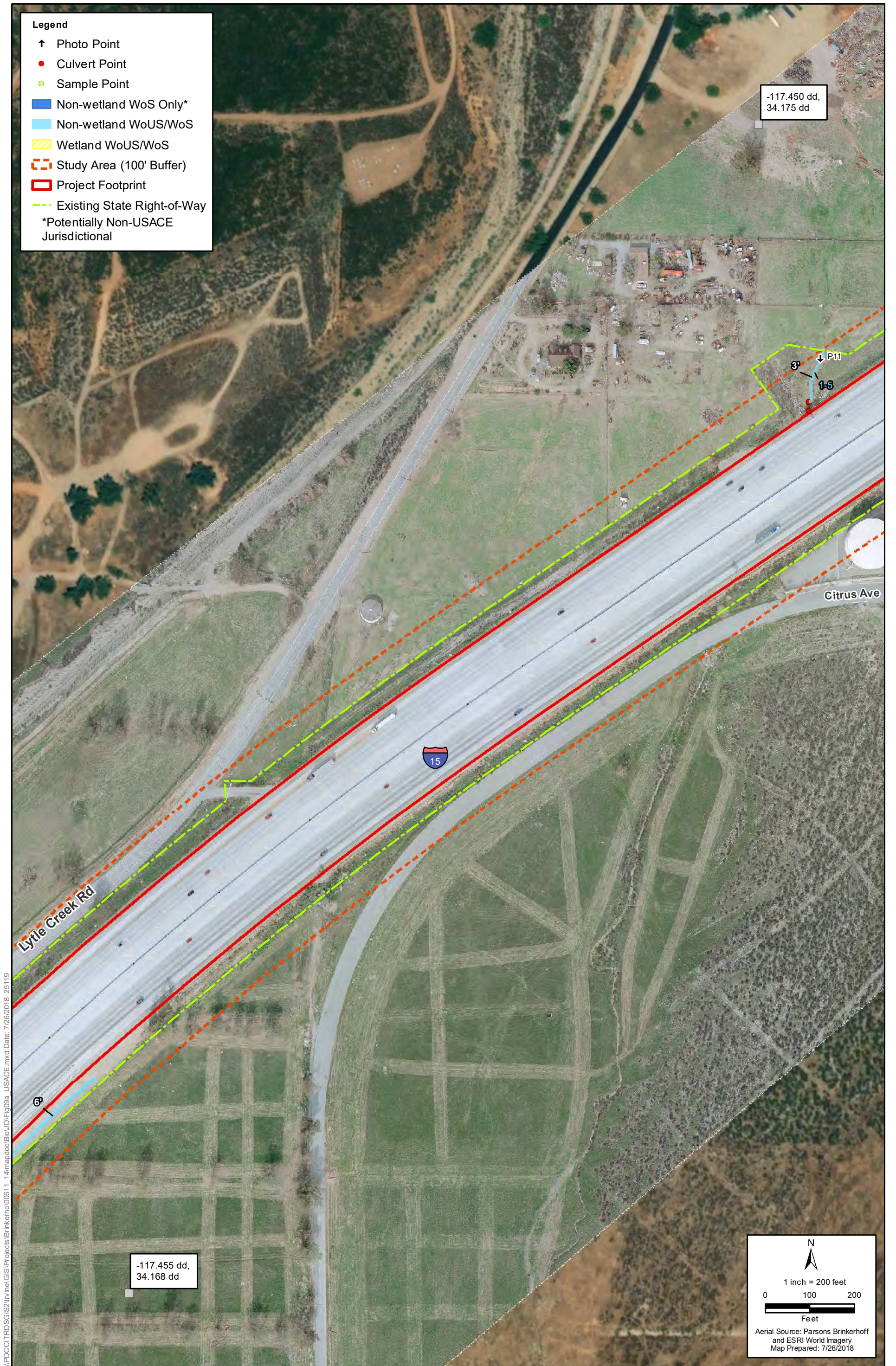


Figure 9a - Sheet 3
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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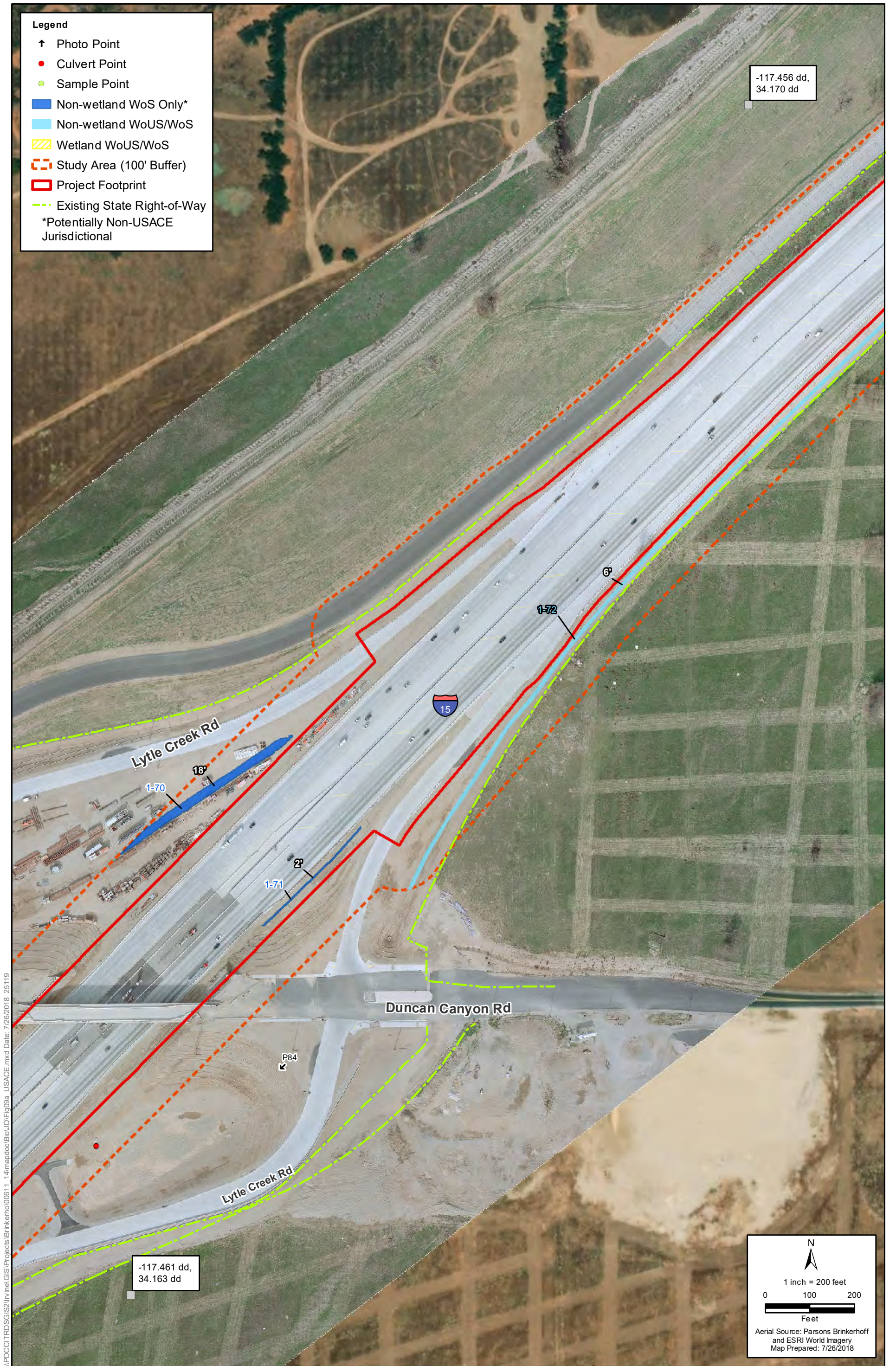


Figure 9a - Sheet 4
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 5
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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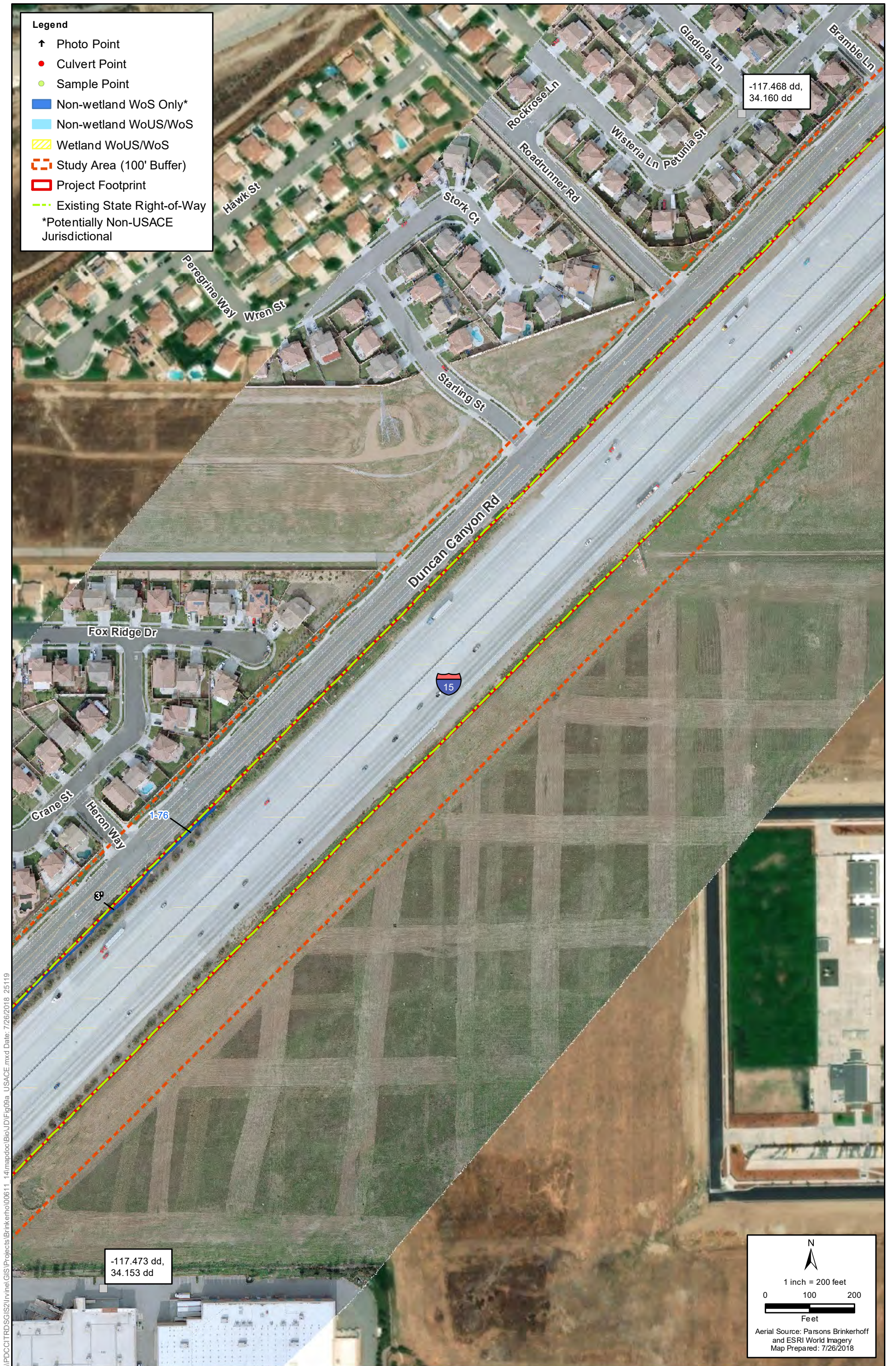


Figure 9a - Sheet 6
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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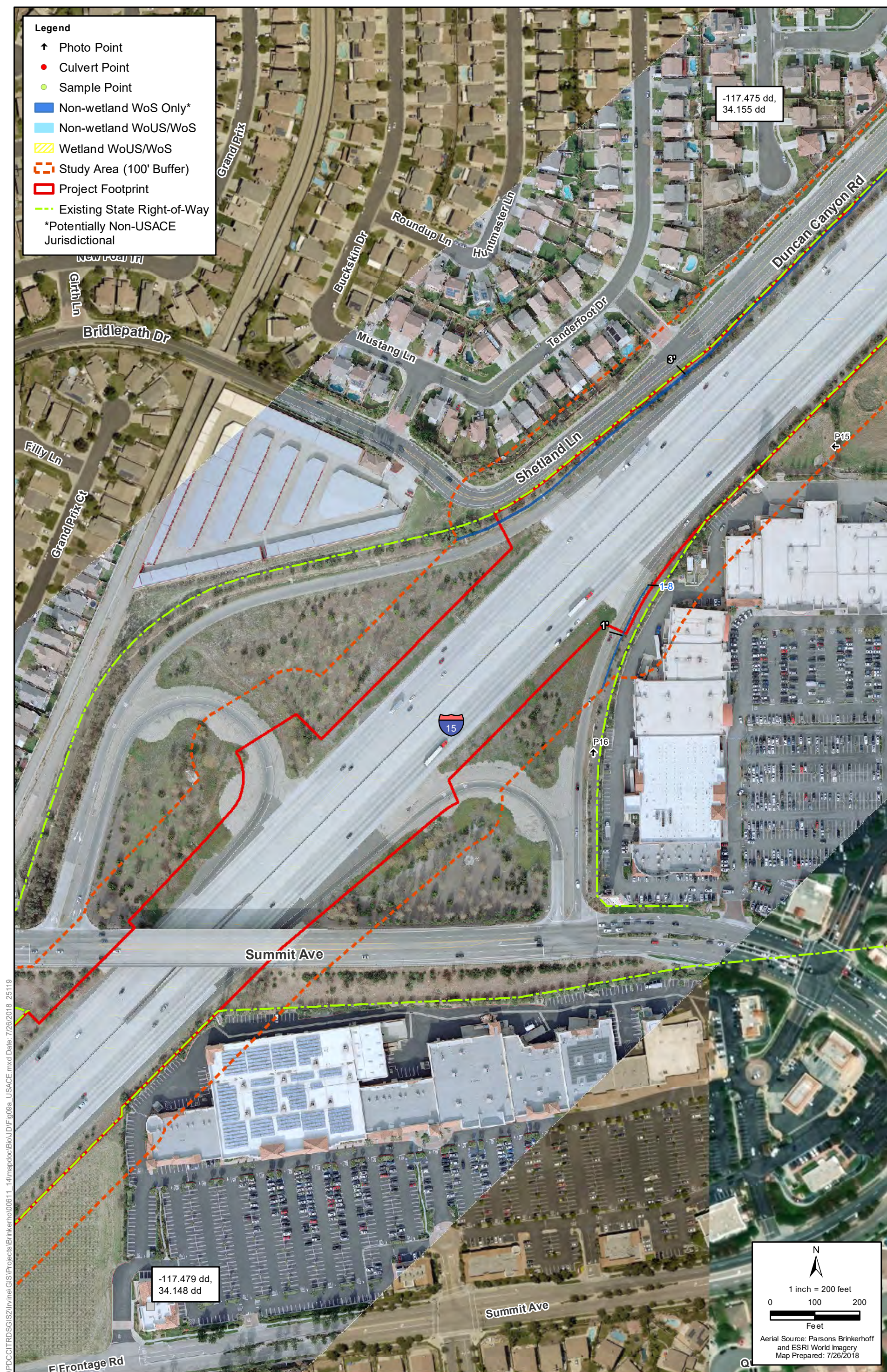


Figure 9a - Sheet 7
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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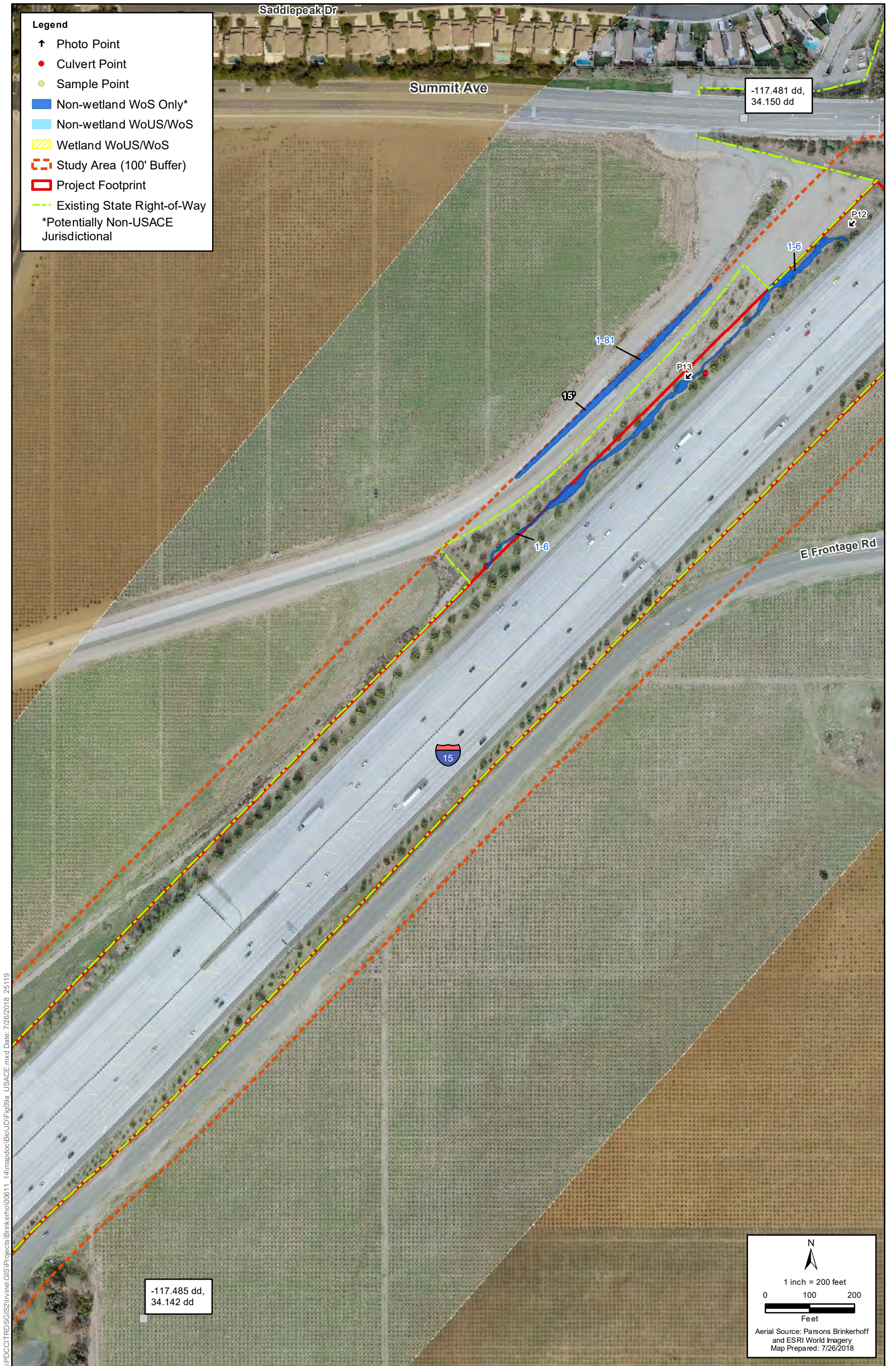


Figure 9a - Sheet 8
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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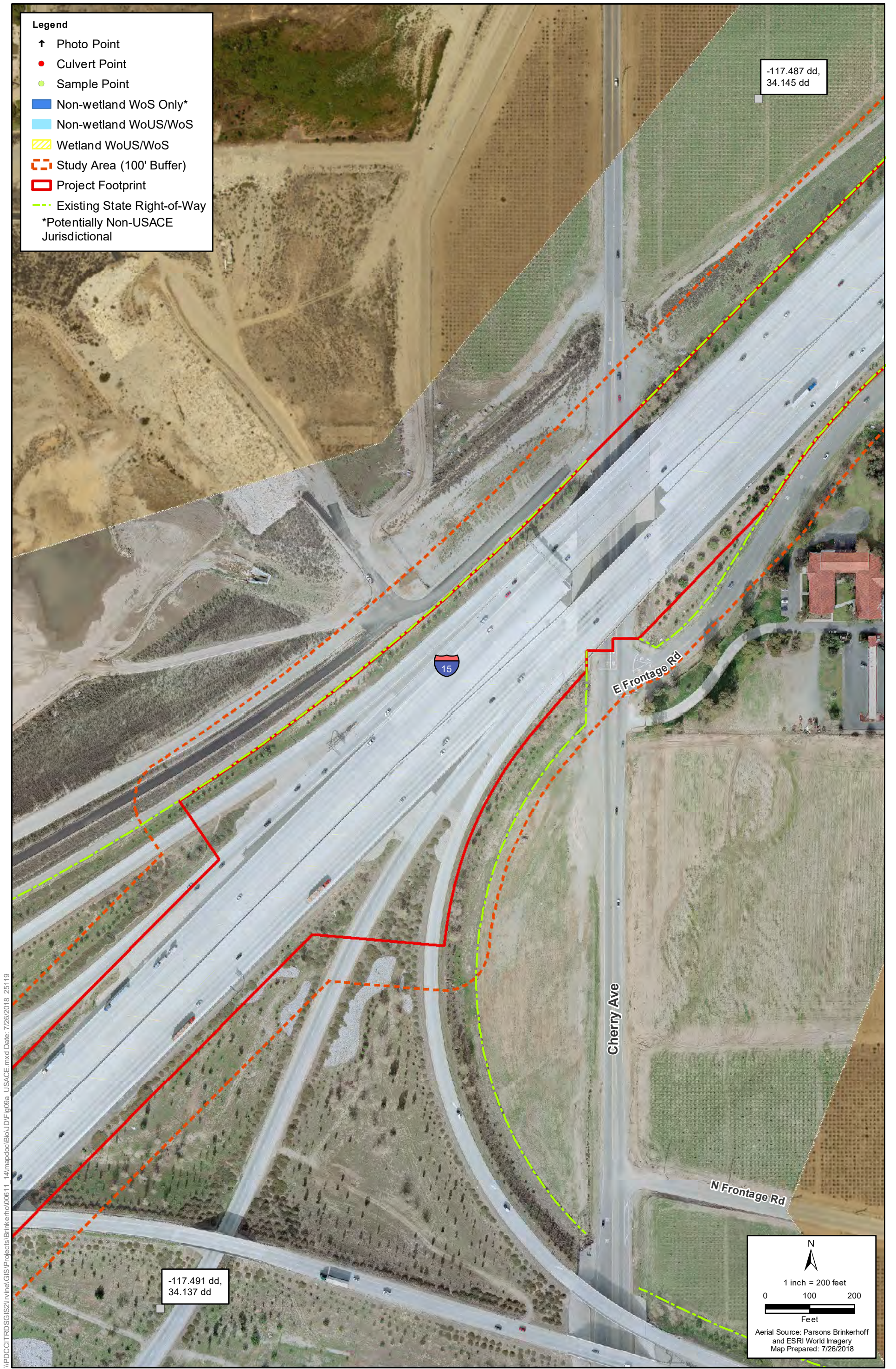


Figure 9a - Sheet 9
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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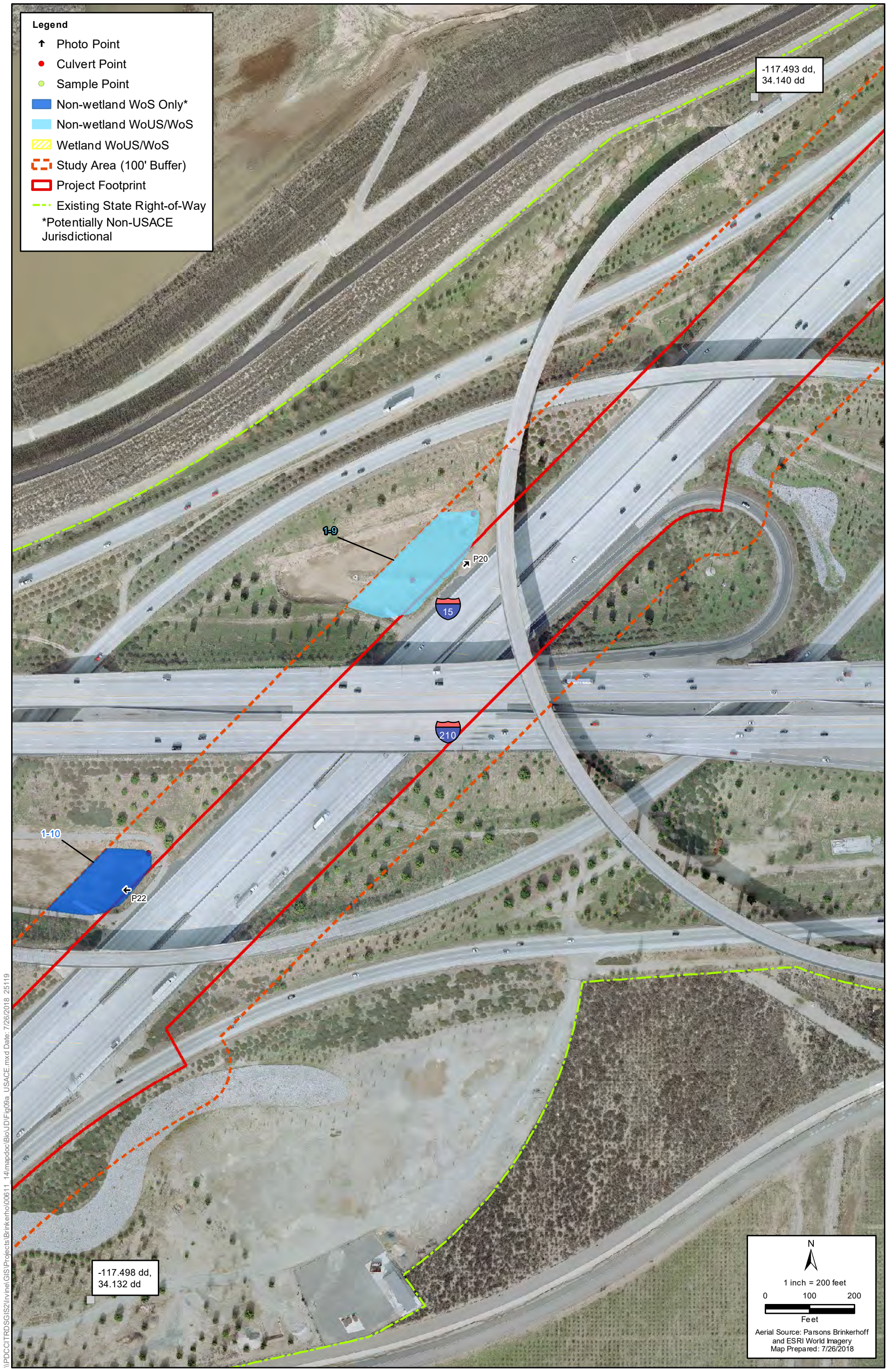


Figure 9a - Sheet 10
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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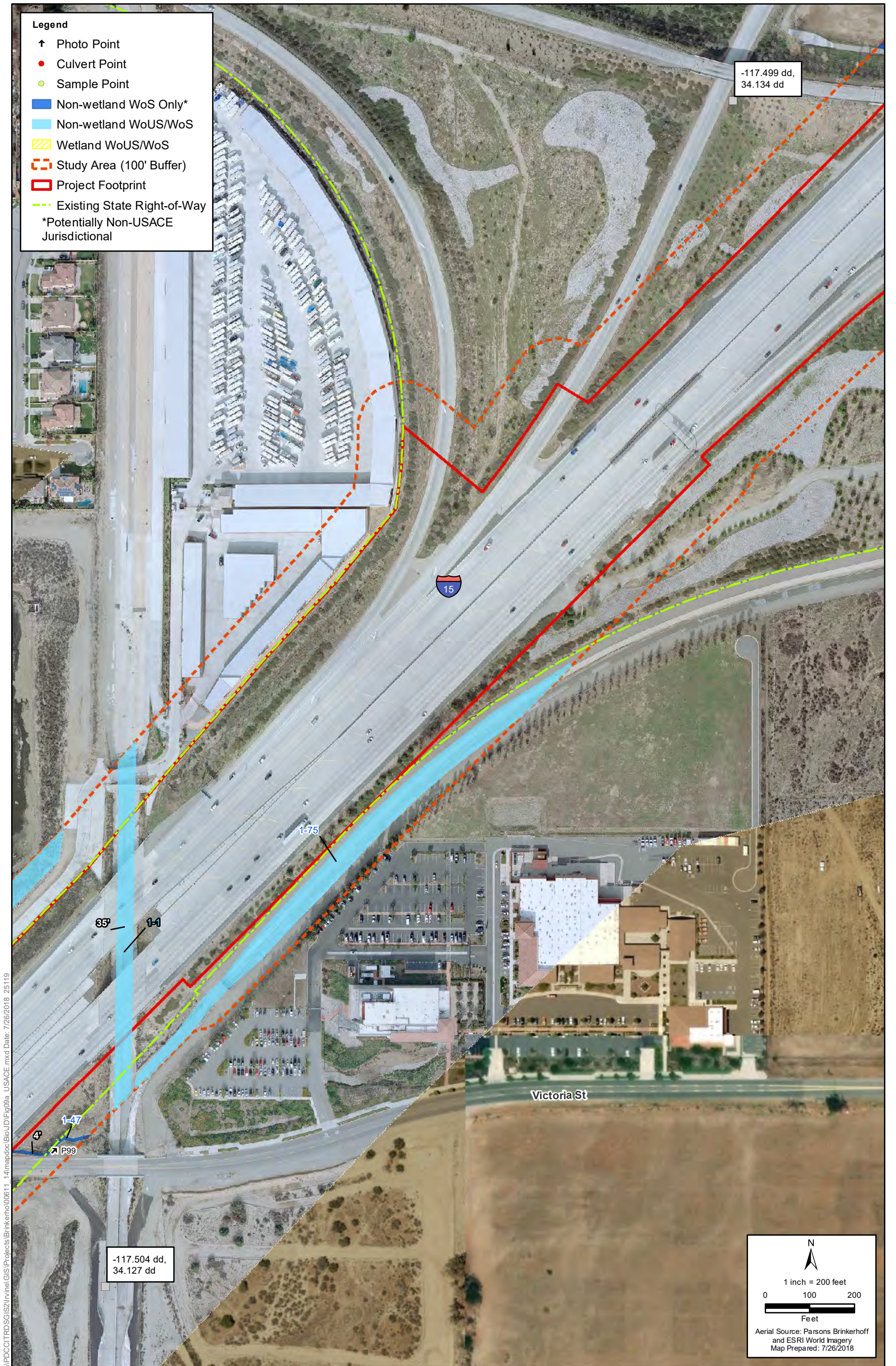


Figure 9a - Sheet 11
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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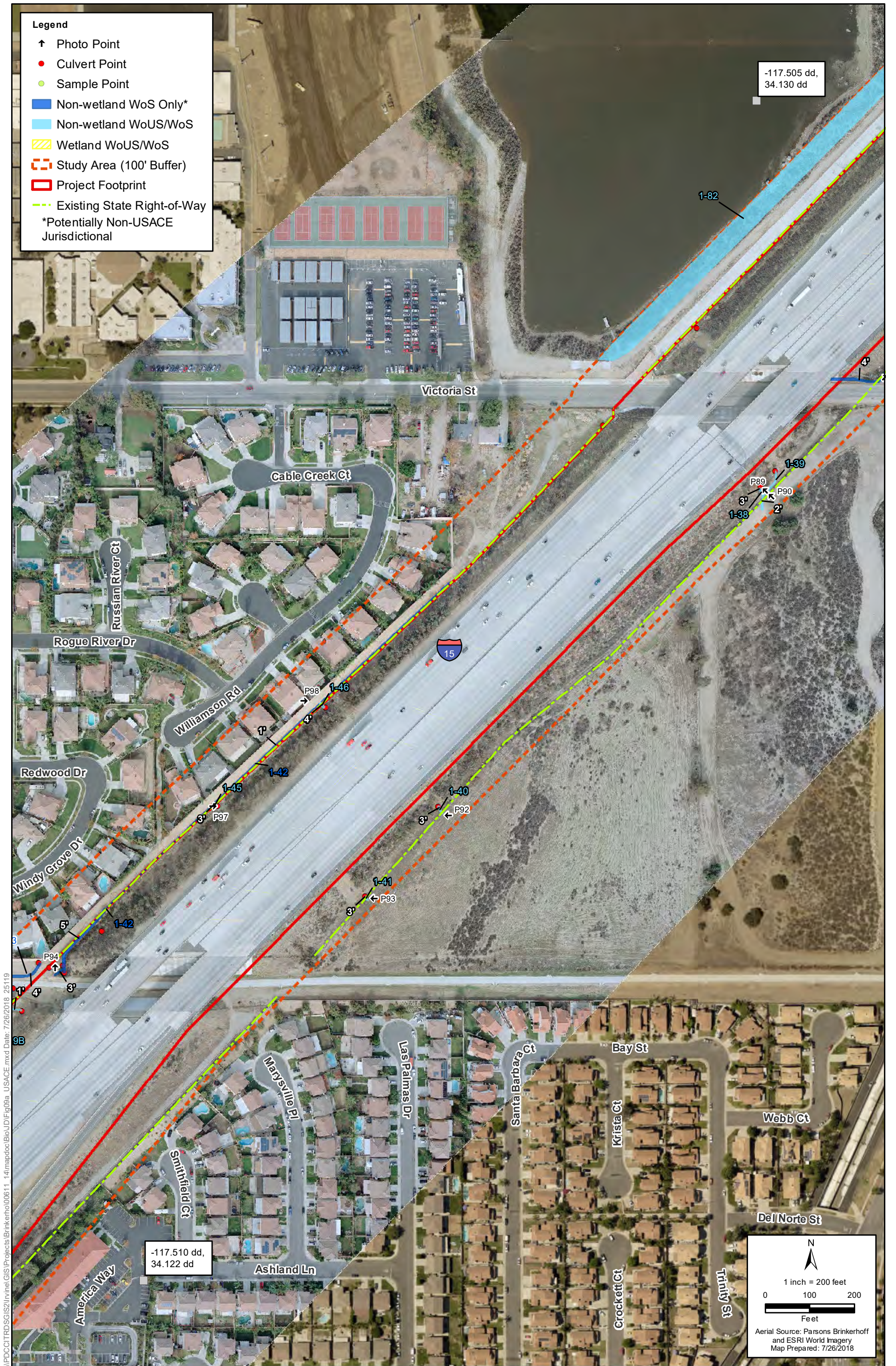


Figure 9a - Sheet 12
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 13
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Interstate 15 Corridor Project

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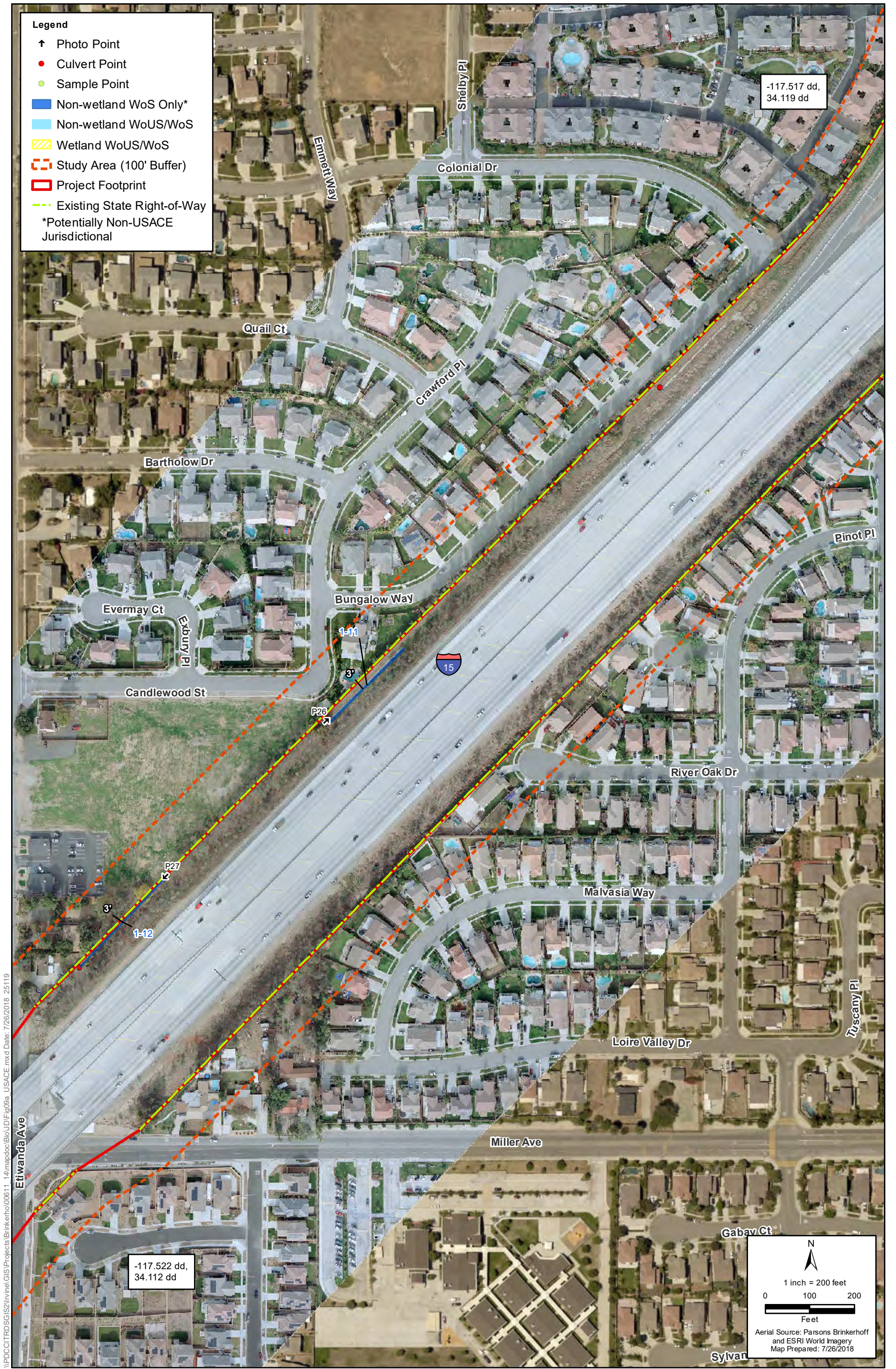


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 16
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 17
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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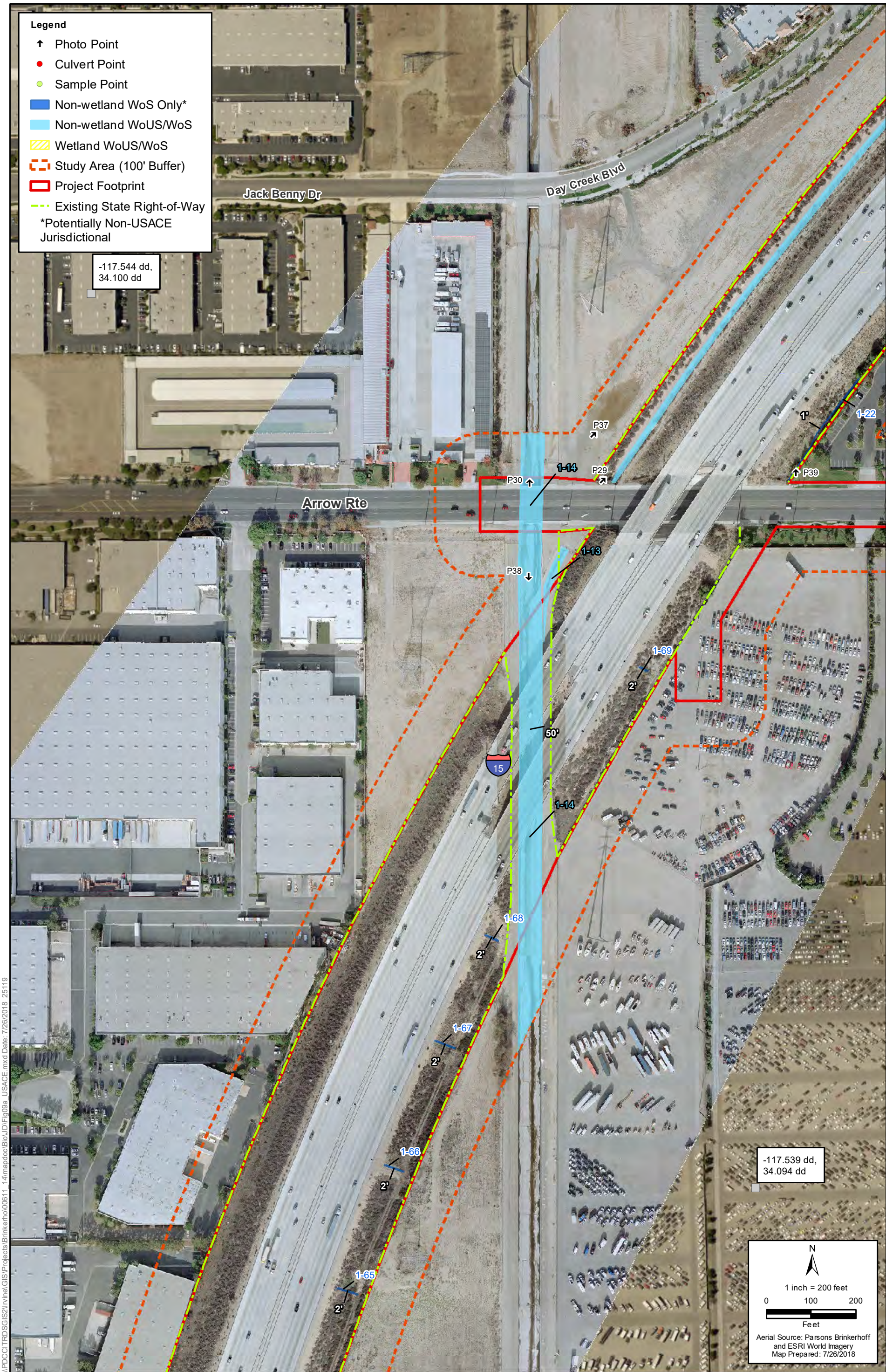


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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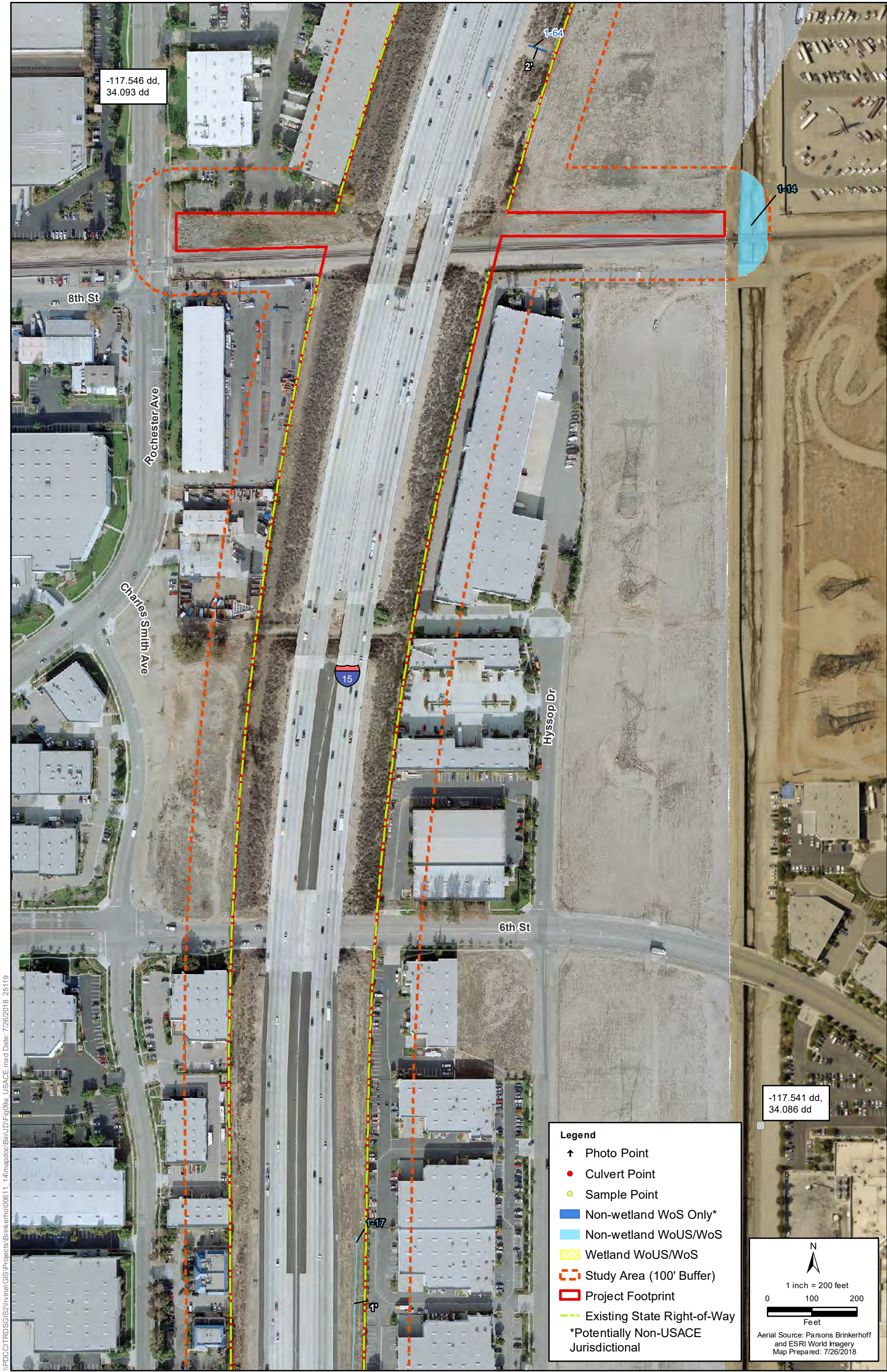


Figure 9a - Sheet 19
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 20
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Interstate 15 Corridor Project

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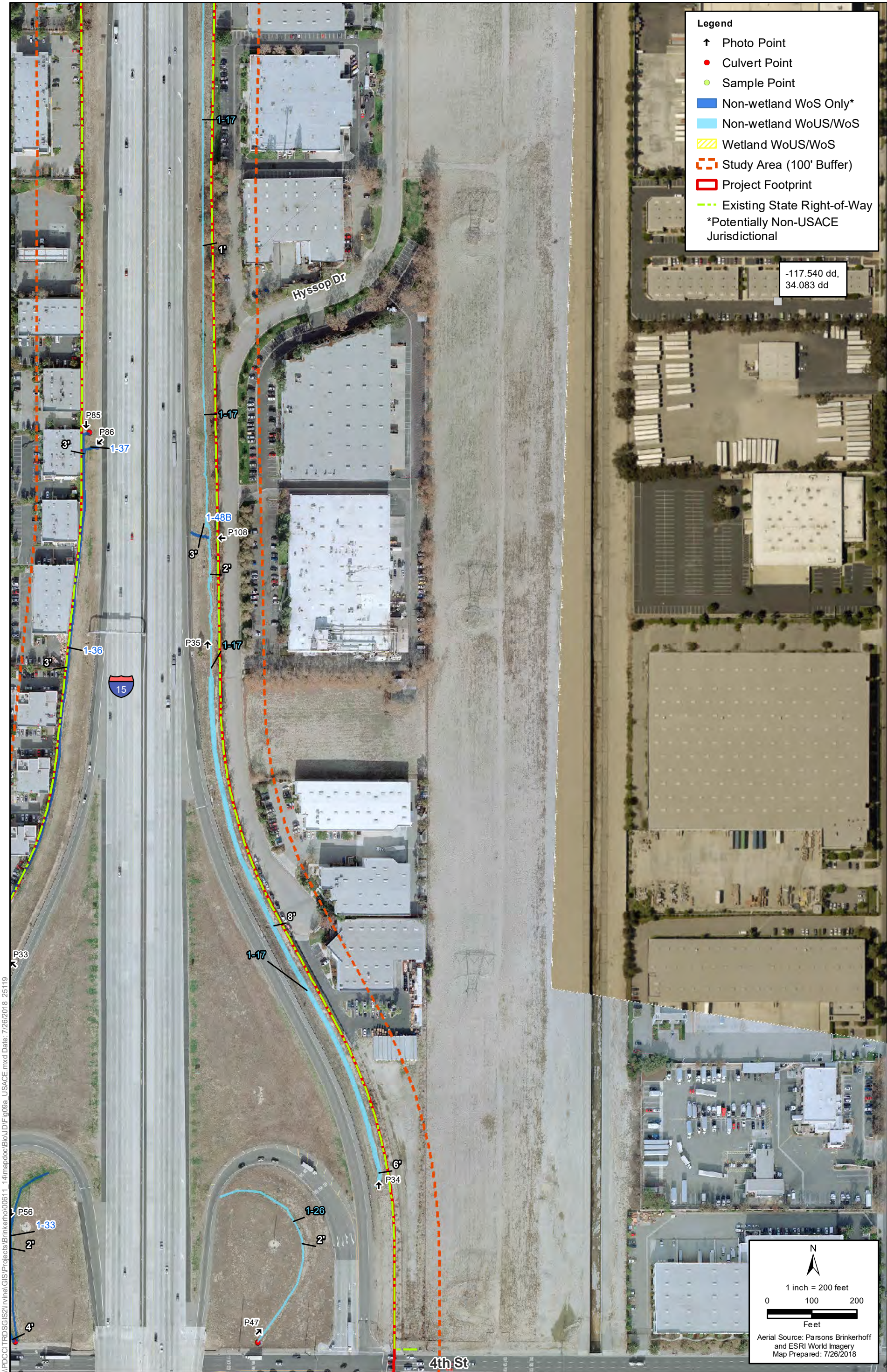


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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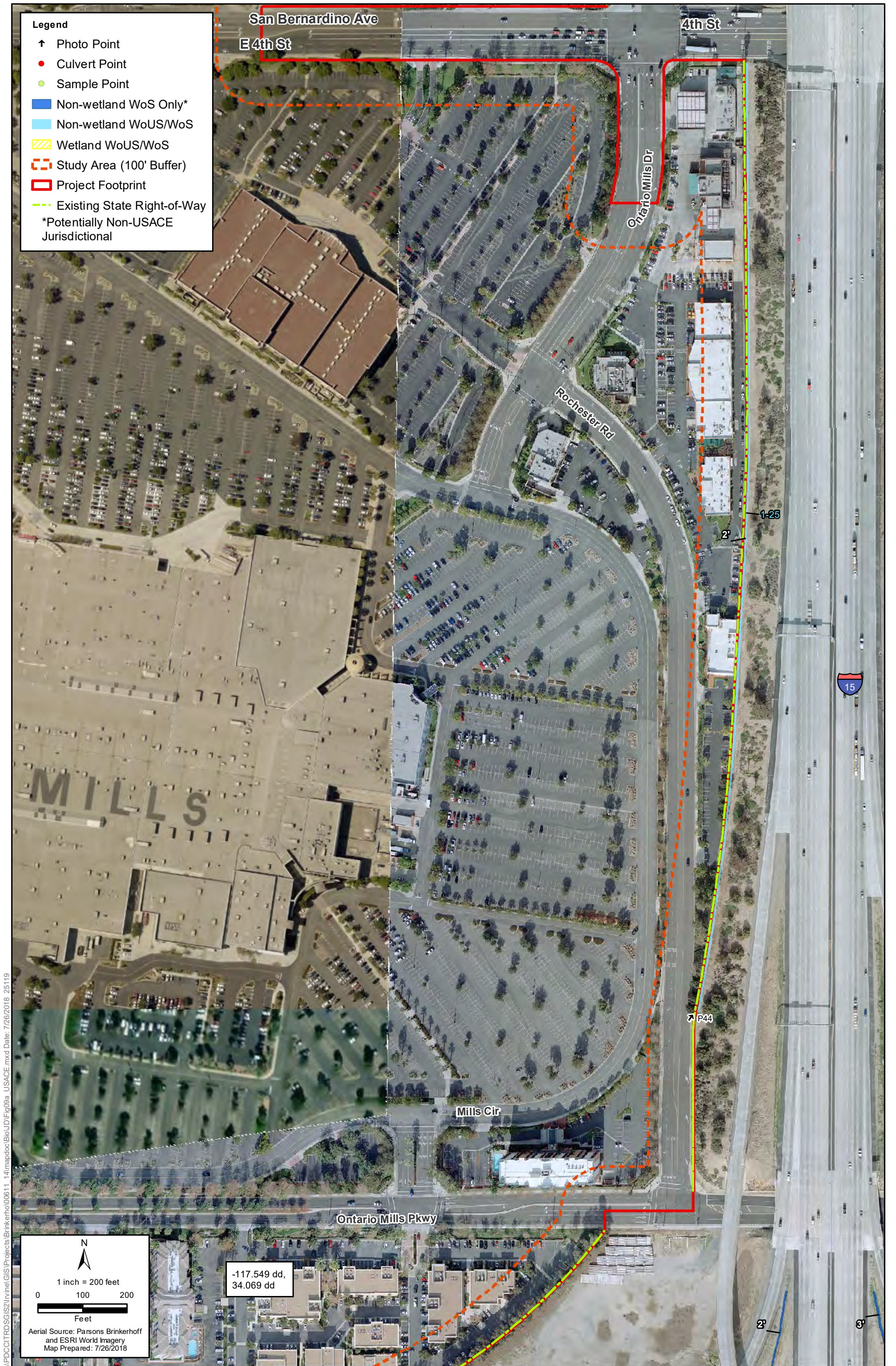


Figure 9a - Sheet 22
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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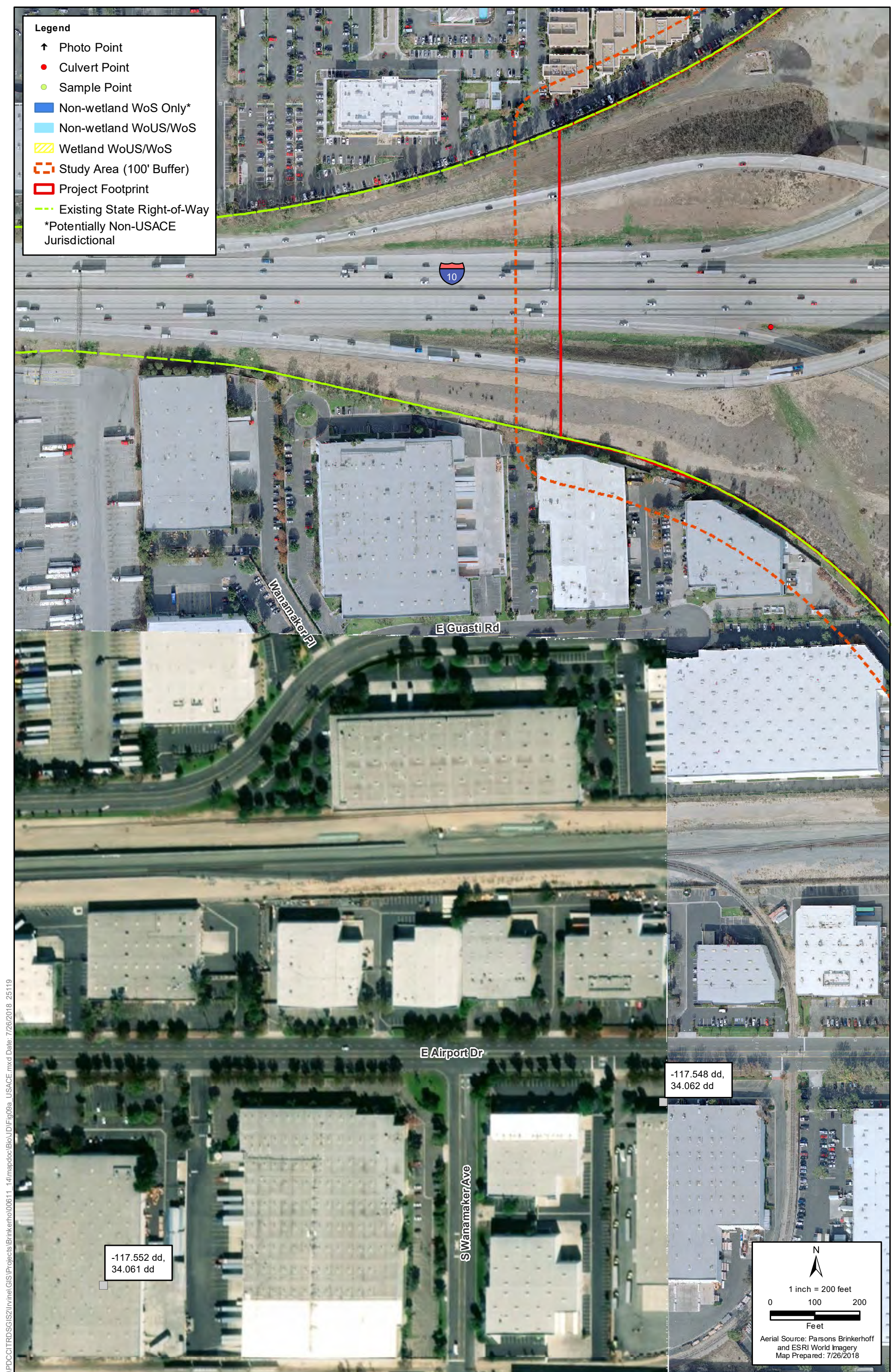


Figure 9a - Sheet 24
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 25
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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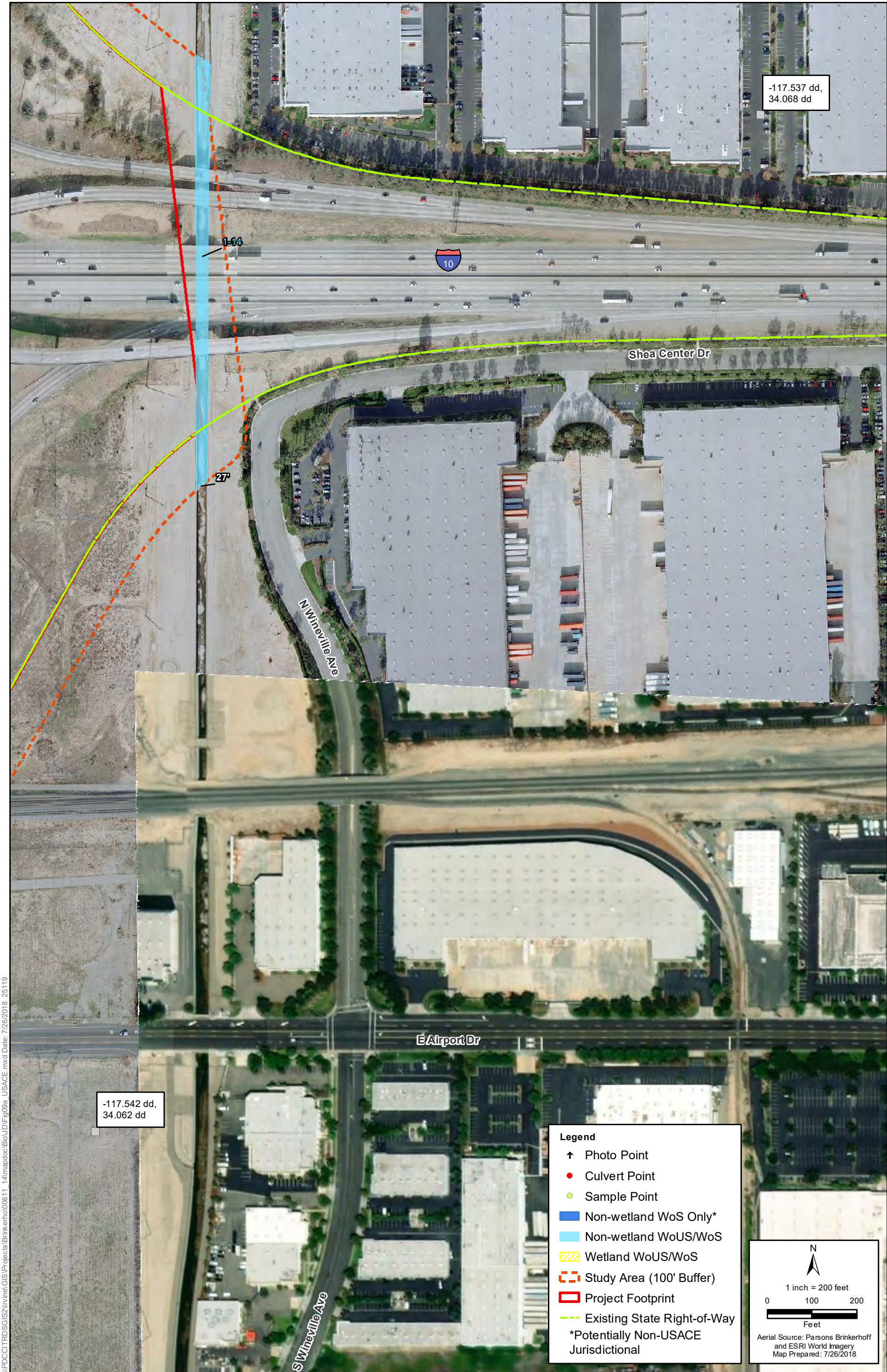
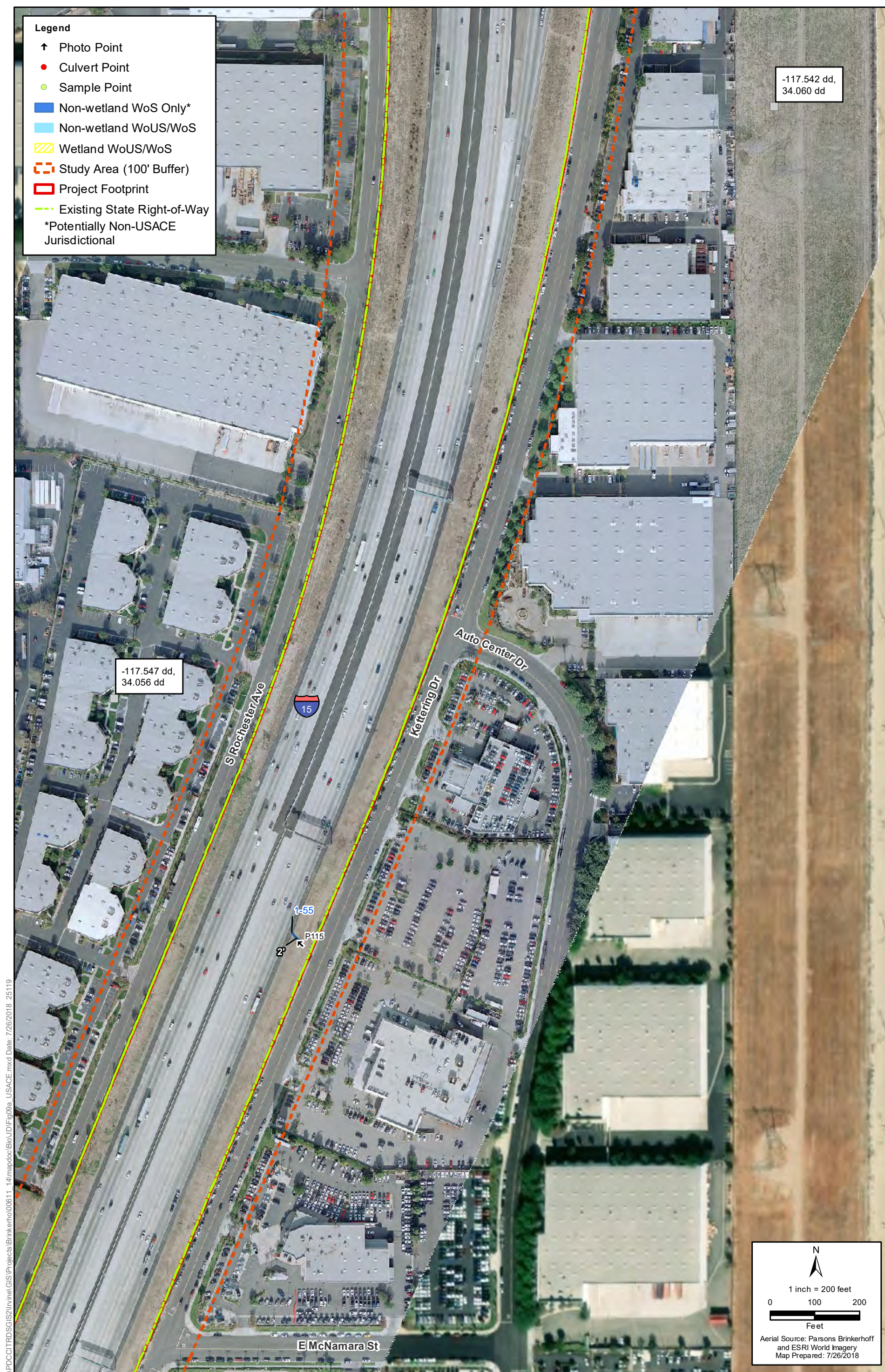


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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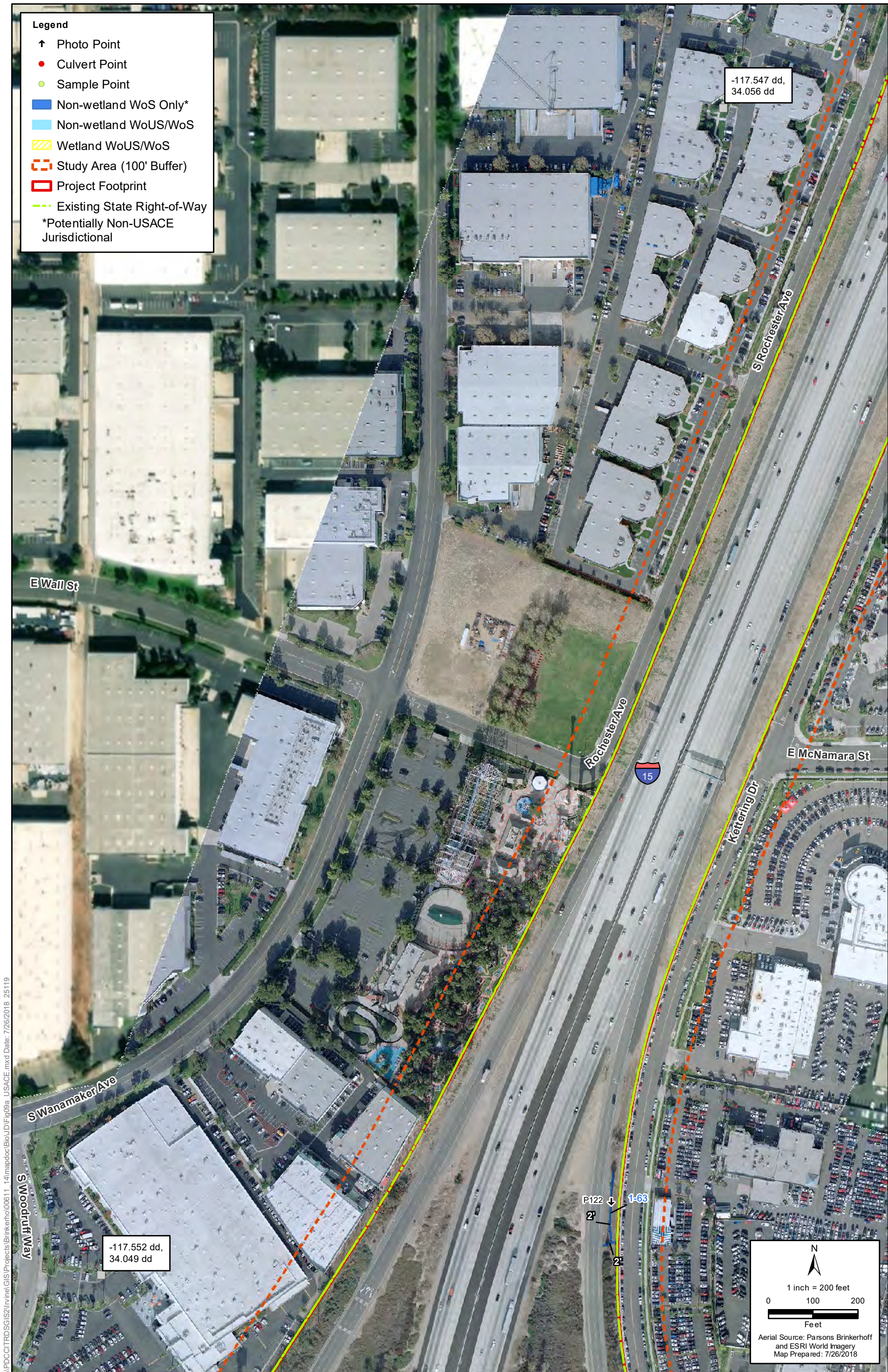


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 29
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Interstate 15 Corridor Project

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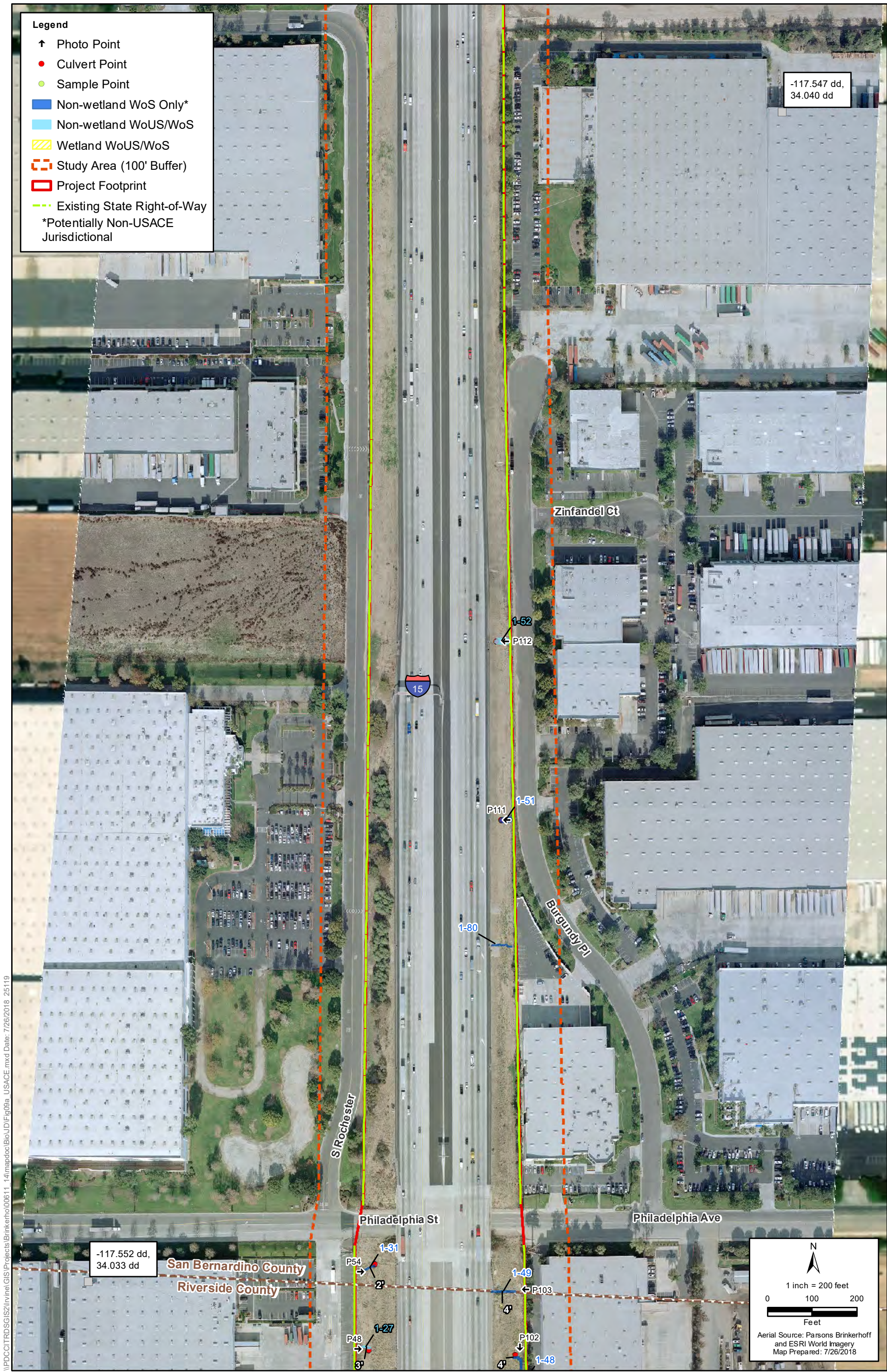


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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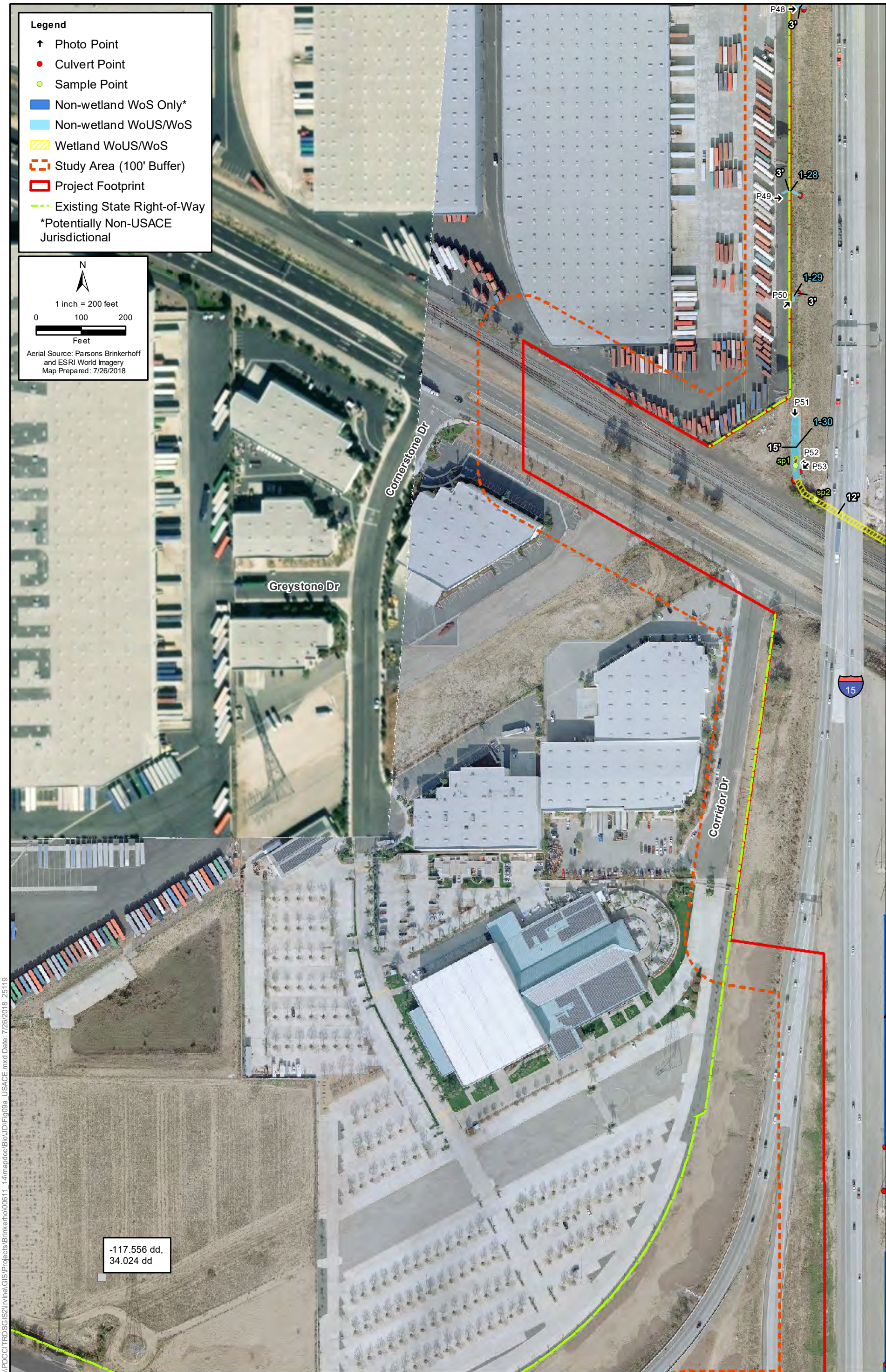


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 32
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Interstate 15 Corridor Project

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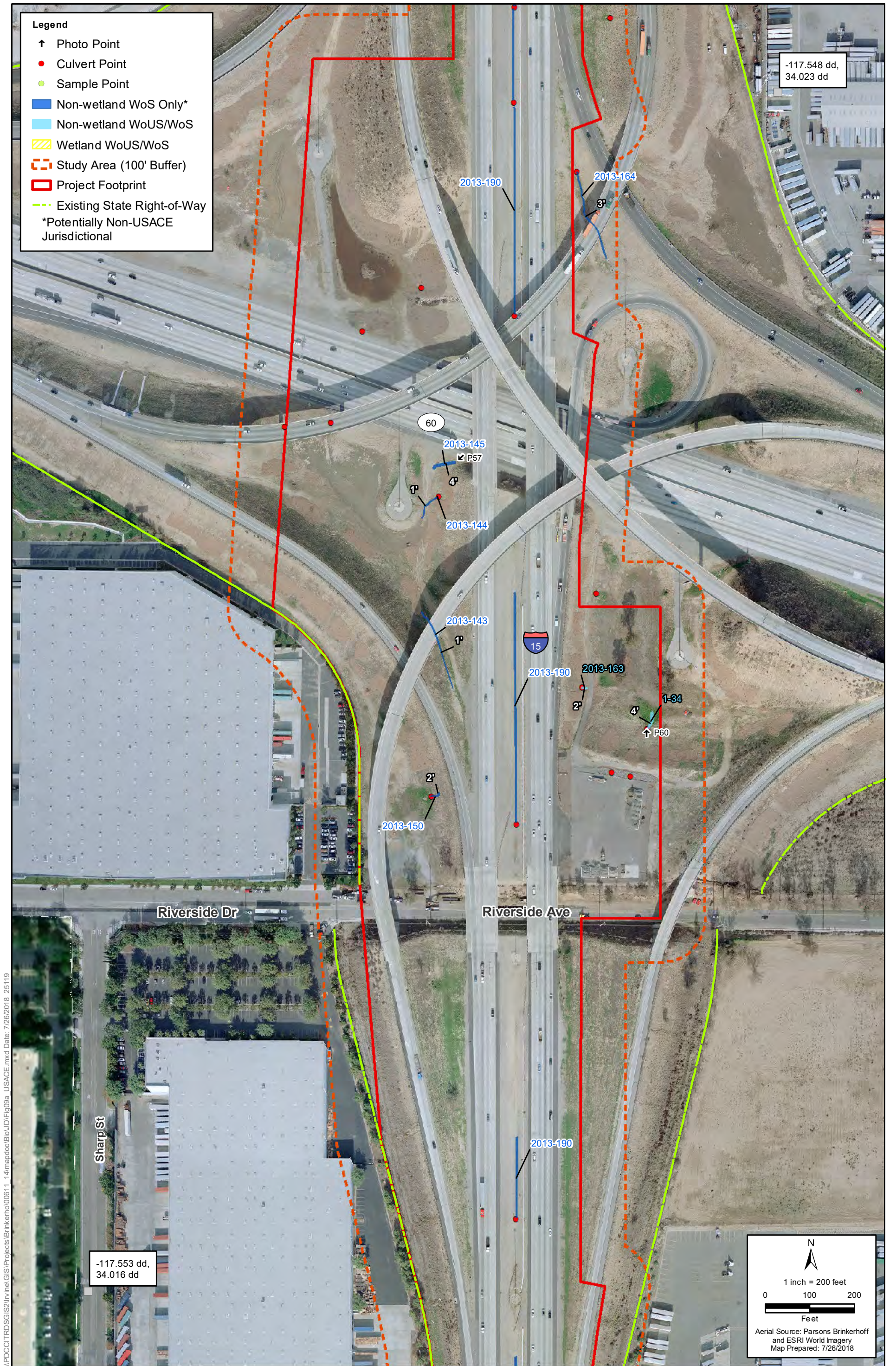


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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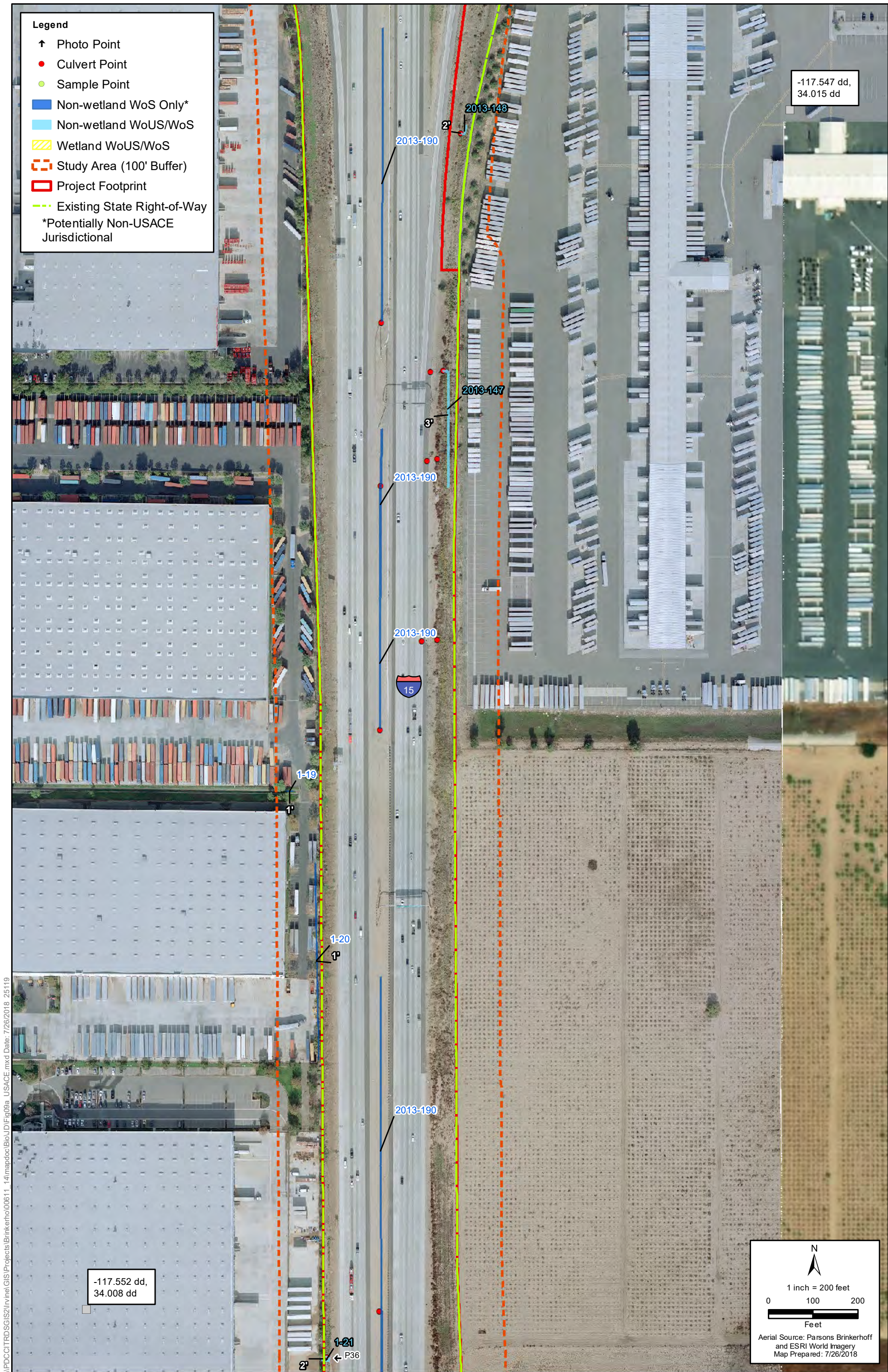


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USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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Figure 9a - Sheet 36
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Interstate 15 Corridor Project

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Figure 9a - Sheet 37
USACE/RWQCB Jurisdictional Delineation Results
Interstate 15 Corridor Project

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